Modern

LITHOGRAPHY

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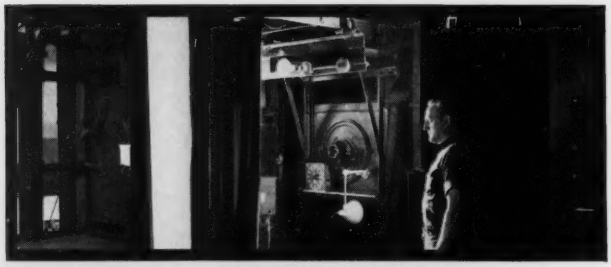

Cameraman
Ed Bines

because it "cuts down annoying time wasting make-overs! Its ability to hold the finest line and screen dot is remarkable."

Dot Etcher
Jim Woodruff

because "its thin coating gives extremely sharp reproduction of half-tones. Uniformly dense dots, unsurpassed for dot-etching!"

Stripper
Bill Ward, Sr.

because "thin base Litholine makes it easier to strip up line and halftone . . . especially butting negatives . . . or when superimposing film on film."

Shop Foreman
Al Steitz

because "at every step, from camera to press, the uniformly high quality of Litholine saves us hours of work, has been a vital 'factor' in speeding up production."

Because Quality Counts at Every Stage...

Empire Color Lithographers Prefer GEVAERT

The Customer...

who appreciates Gevaert's contribution to his high quality end result.

Gevaert Litholine, available in a wide range of coatings and base materials, is the highest-contrast Litho emulsion on the market. Product of world-famed GEVAERT, makers of high-quality sensitized materials for over 65 years, Litholine assures consistently sharp screen dots and high resolution separation of fine lines. Its extremely high density half-tone reproduction is excellent for dot-etching.

Litholine Ortho O 84p — maximum contrast, highest sensitivity, latitude, resolution. Heavy .010″ polystyrene base.

Litholine Ortho O 81 — thin .003″ base for line or screen positives and negatives.

Litholine Ortho O 82 — same emulsion, regular .006″ base.

Panchromatic P 24p — a fast pan emulsion, with long gradation, wide latitude in exposure and development. Ideal for color separation work, on .010″ polystyrene base.

Write for free samples of Gevaert Litholine today:

THE GEVAERT COMPANY OF AMERICA, INC.
321 West 54th Street, New York 19, N. Y.
District Offices: Lincolnwood, Ill. (Chicago) • Los Angeles • Dallas • Denver • San Francisco

GEVAERT

Frank Smith (right) and Pat White, Roberts & Porter representative, discuss features of register device on new Lanston photo-composing machine purchased by Gravure Process Company, Chicago. R & P service *before* the sale means the customer gets the graphic arts tools that are just right for *his* operation. And, like Pat White, every Roberts & Porter representative follows through to make sure you get the full benefit from what you buy.

"We know first-hand

that Roberts & Porter representatives take a personal interest in a customer's problems..."

Ed Smith, Sr.
Gravure Process Company
Chicago, Illinois

Gravure Process Company, Chicago, has specialized in *quality* work since 1928—it's a family tradition. Ed Smith has two sons active in the business: Frank, who appears in the photograph, has charge of the camera gallery. Ed, Jr., supervises the etching and finishing departments. To assure maximum control over quality —*and* over costs—the Smiths take advantage of the latest developments in graphic arts equipment, supplies, and techniques. Naturally, they depend on their suppliers to keep them informed on what's new in the field. Ed Smith, Sr. put it this way:

"We know what we want to accomplish—turn out top-quality work right on schedule. We have to keep costs under control, too. Believe me, this calls for the right kind of equipment and supplies and we need help from somebody who's on the ball when it comes to picking out what's right for *us*. So, we go for R & P service. We know first-hand that Roberts & Porter representatives take a personal interest in a customer's problems. Pat White worked with us from the time getting this photo-composer was just an idea, and he still keeps tabs on things."

It's the same story you hear all over the country; only the words are a little different. Printers, lithographers, platemakers, photoengravers, silk screen houses, gravure plants find that the sure way to get the equipment and supplies that are just right for a specific operation is to ask their R & P representatives to help. And right now they're talking about the latest benefit in discussing equipment with Roberts & Porter: you can either *purchase* equipment, as did Gravure Process Company, or take advantage of the new R & P low-cost equipment *lease* plan which is explained in the *free* booklet "*Roberts & Porter's new simplified lease plan.*" Send for your copy.

ROBERTS & PORTER
INCORPORATED

R&P

CHICAGO • NEW YORK • BOSTON • BALTIMORE • CINCINNATI • CLEVELAND • DETROIT
KANSAS CITY • LOS ANGELES • MILWAUKEE • PHILADELPHIA • SAN FRANCISCO

1. Vacuum Printing Frame, Floor Model
2. Dot Etching Table
3. Plate Whirler
4. Elevating Type Vacuum Frame
5. Temp. Controlled Dark Room Sink
6. Layout Table
7. Down Draft Table

EARNED LEADERSHIP

Through engineering, research and consultation with experienced platemakers, Brown photomechanical equipment has won acclaim for quality performance and rugged durability at reasonable prices. Compare the obvious quality and moderate cost of Brown equipment against all others in the field. Free catalog and prices are available without obligation.

Dealers in all Principal Cities

W.A. BROWN

MANUFACTURING COMPANY, 608 SOUTH DEARBORN STREET, CHICAGO 5, ILLINOIS

Cover

J. Tom Morgan, Jr., (left) new president of the National Association of Photo-Lithographers, shares the spotlight with outgoing president Stanley R. Rinehart. For story on record-breaking convention, turn to page 36.

WAYNE E. DORLAND
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MODERN LITHOGRAPHY

VOLUME 28, NUMBER 11 NOVEMBER, 1960

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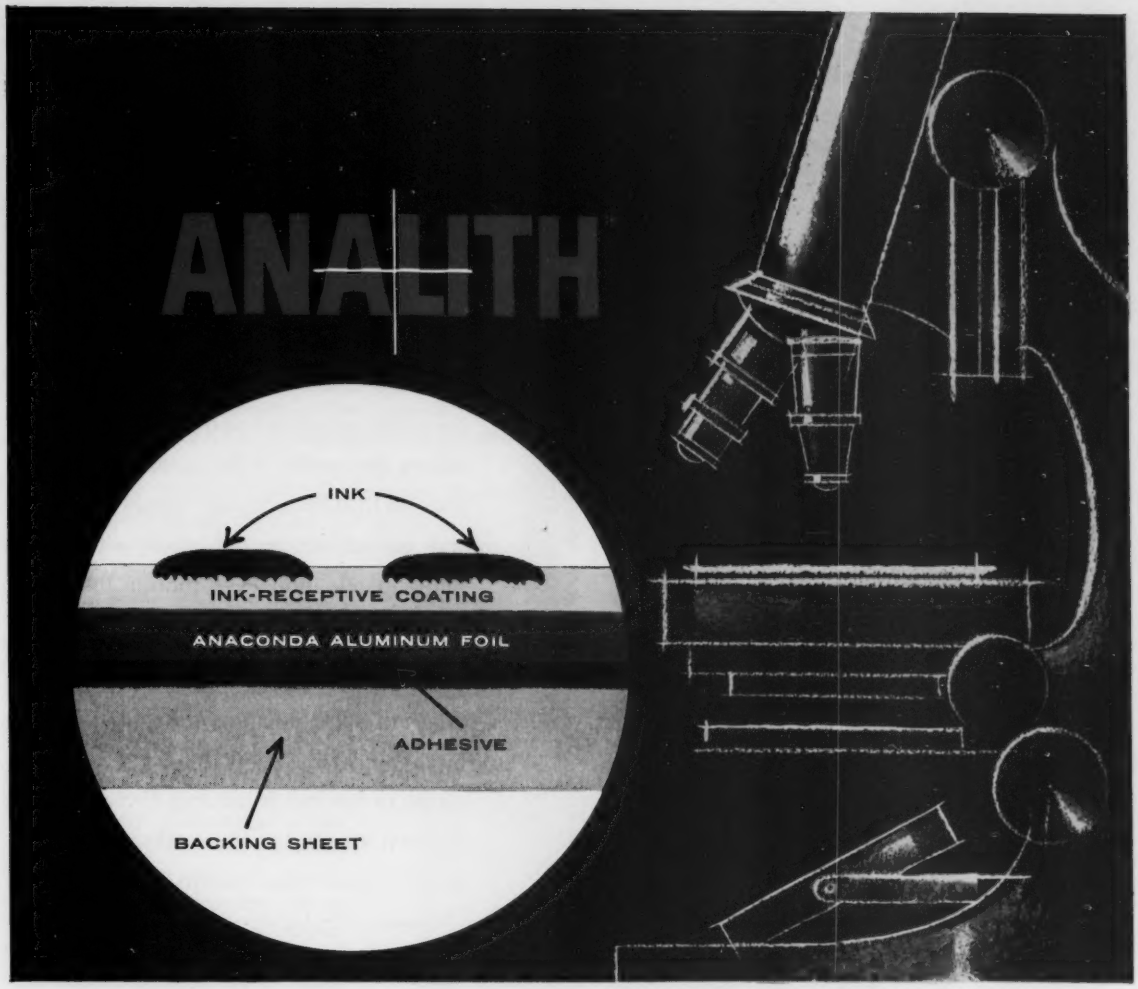
FROM
ANACONDA
ALUMINUM...

IMPORTANT NEWS FOR LITHOGRAPHERS ABOUT LITHOGRAPHY ON FOIL!



ANALITH pre-coated foil stock is custom-produced by Anaconda Aluminum to make your foil lithography more profitable!

This representation of a magnified cross-section clearly shows why ANALITH *pre-coated* foil stock from Anaconda Aluminum can increase your profits in the expanding foil lithography field.

The ink-receptive coating shown means more trouble-free press runs at *profitable press speeds.* Actually, all laminated foil stock must have such a coating on which to print. And ANALITH foil stock comes to you *pre-coated* to meet your job requirements, ready for your press—all a part of Anaconda Aluminum's custom-production of your order.

Custom-production of ANALITH foil stock starts with precision rolling of the foil itself. It continues through lamination to the proper paper backing for the best lithographic reproduction. Then comes the ink-receptive coating. The result? The finest printing surface available for your foil lithography.

This custom-production procedure is followed on *every single order* at Anaconda Aluminum, assuring you more satisfactory, more profitable runs because your order is tailored to your particular job.

ANALITH foil stock, as well as other special pre-coated aluminum foil stocks for other printing processes, is available to you in any form—colored, embossed and laminated to a variety of paper and board stocks. Call your nearby Anaconda Aluminum representative now for full information, or write Anaconda Aluminum Company, Dept. MA-11, P.O. Box 1654, Louisville 1, Kentucky.

*Trademark Anaconda Aluminum Company, Louisville 1, Ky.

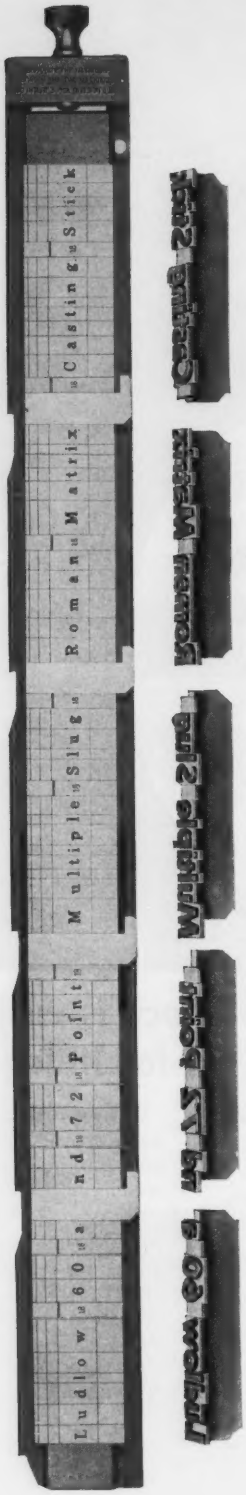
ANACONDA ALUMINUM

When you buy foil for packaging or lithography, remember . . .

Every industry has one member who specializes in customer satisfaction

ANACONDA ALUMINUM COMPANY • GENERAL OFFICES, LOUISVILLE, KENTUCKY

Long Lines LUDLOW-SET with a single justification



Showing a Ludlow stick with a line of matrices ready for casting the sluglines directly below. Notice the ready spacing of the line, the division quads, and the "overhangs" which fit perfectly into adjoining recesses.

Here is another economy feature of Ludlow operation which not only cuts costs but improves the quality of the composition. Long lines up to 112½ picas are readily assembled and spaced out in one stick, with only a single justification, even though the resultant line is cast in several sections.

The line of Ludlow matrices is assembled in the long stick, and the entire line is then spaced out as usual without regard to the length of the individual slug. Division quads are then inserted at the marks on the stick which indicate slug lengths. All that is then necessary is to tighten the stick knob before making a cast.

When the slugline is cast, it is delivered in unit slug sections. If a character happens to overhang the end of one slug, it fits into a recess automatically cast on the next slug to support that overhang.

This is just one of many Ludlow features which eliminate unnecessary delays and expense in the composing room. The Ludlow provides a system of composition of utmost flexibility. Literature telling the Ludlow story will be gladly sent on request.

LUDLOW TYPOGRAPH COMPANY

2032 Clybourn Avenue · · · Chicago 14, Illinois

Set in members of the Ludlow Radiant family

First on the West Coast with 2 RUTH-O-MATICS

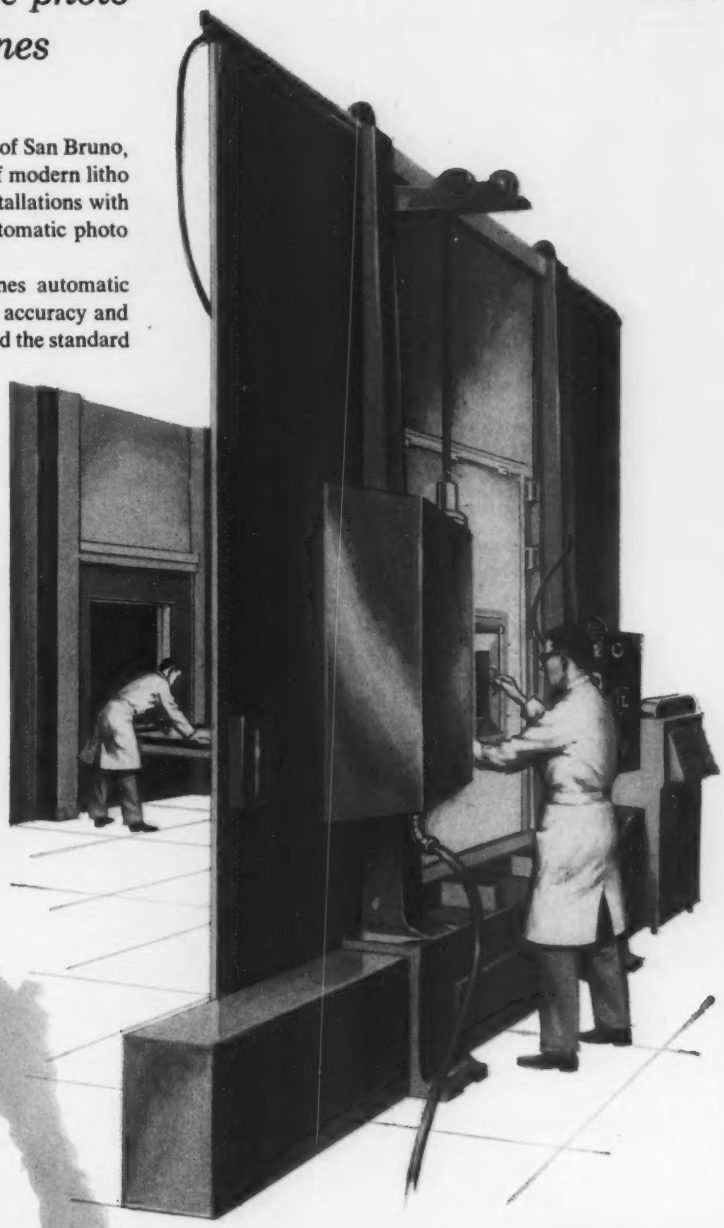
the fully automatic photo composing machines

The H. S. Crocker Company, Inc. of San Bruno, California, joins the growing list of modern litho plants who are equipping their installations with RUTH-O-MATIC, completely automatic photo composers.

The RUTH-O-MATIC combines automatic positioning and exposure with the accuracy and durability that has made Rutherford the standard of accuracy and the hallmark of lithographic equipment.

RUTH-O-MATIC's unique electrical control system positions, exposes the plate or film, moves to the next position, cycles, and returns to load position—all at the push of a button—completely eliminating manual settings and the possibility of human error.

For complete details on the Ruth-O-Matic or other Rutherford machinery for the graphic arts, call or write:



RUTHERFORD MACHINERY COMPANY

DIVISION OF

SUN CHEMICAL CORPORATION

401 Central Avenue, East Rutherford, New Jersey

Branches in all Principal Cities of the United States

do letterheads and envelopes

match?

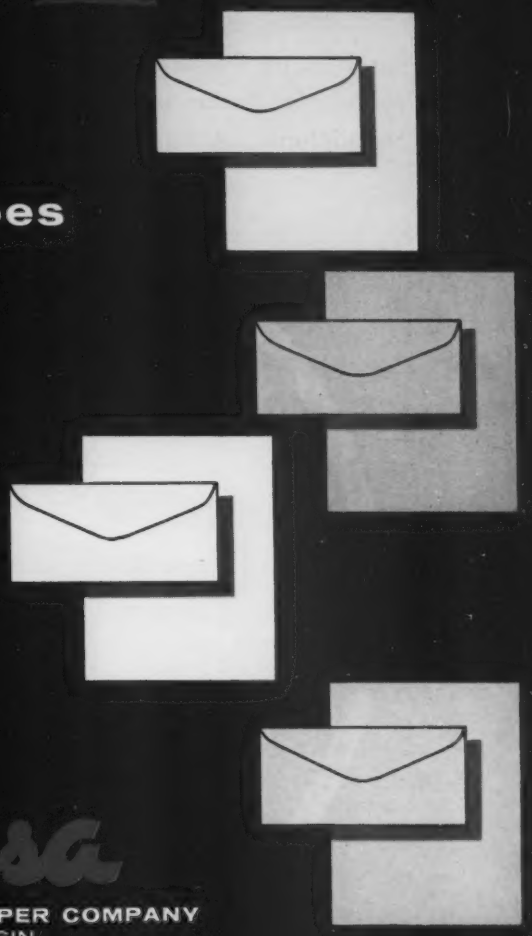
natch!

...when they're NEKOOSA Matching Envelopes

Sell letterheads in color and matching envelopes in color! What a wonderful and simple way to double your printing orders. The paper is Nekoosa Bond...and there's a Nekoosa Bond envelope in twelve handsome colors (and white, of course) to match every letterhead.

Nekoosa Bond envelopes are not ordinary envelopes. They are designed with the printer in mind. Because of their modern construction, minimum make-ready is required. And a new fast-seal gumming speeds Nekoosa envelopes through high-speed presses without sticking or curling.

Your Nekoosa paper merchant has 'em!



Nekoosa

NEKOOSA-EDWARDS PAPER COMPANY
PORT EDWARDS, WISCONSIN
Mills at Port Edwards and Nekoosa, Wisconsin, and Potsdam, New York

Standardization and control with

DIACO Contact Printing Center by Unitronics

The DIACO new, all-in-one "contact camera" incorporates such outstanding features as precision light-metering and color-temperature monitoring controls, large 22" x 26" vacuum frame with register pins, adjustable vacuum pressure, automatic filter wheels, and a light source for every photographic need.

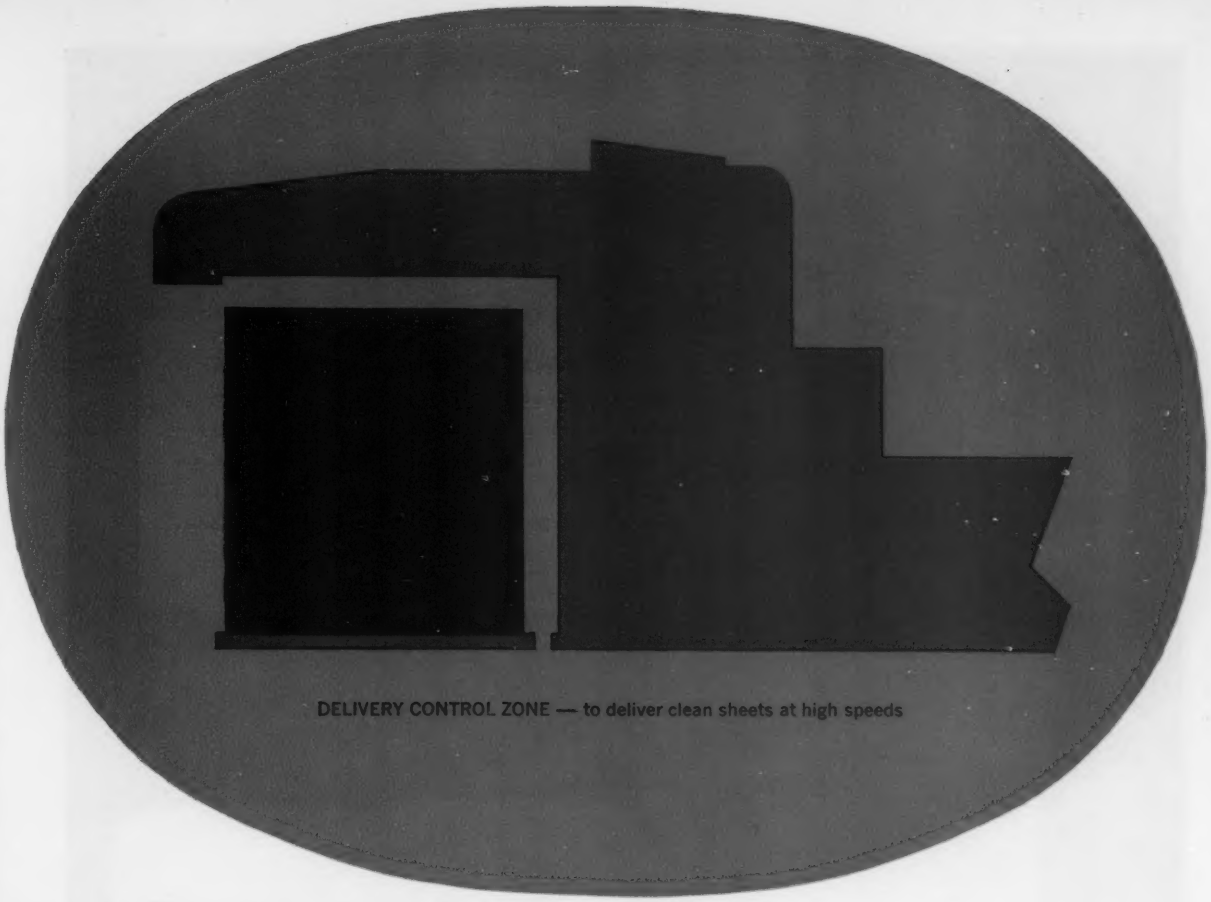
With your photographic technician at the TELL-ALL control panel, he can do color separation, point light duplicating, direct positive exposures, color proofing and masking, all while remaining completely independent of other shop facilities.

The DIACO PRINTER is an entirely new concept... providing everything your photographic technician needs to do his job more economically... and the precision controls to do it better. For more information write Unitronics, Inc., Subsidiary of Lanston Industries, Inc., Box 4768, Philadelphia 34, Pa.

This advertisement was composed on the Monotype in 20th Century Medium and Ultra Bold and Century Bold.

Lanston unitronics, inc.

Proofing Film • Film Dispenser • Light Integrators • Optical Depth Gauges • Contact Camera • Step and Repeat Machines • Overhead Cameras • Plate Coaters • Developing and Darkroom Sinks • Vacuum Printing Frames • Layout and Stripping and Dot Etching Tables



DELIVERY CONTROL ZONE — to deliver clean sheets at high speeds

DELIVER CLEAN SHEETS AT HIGH SPEEDS...

BY control

EVERY INCH OF THE WAY

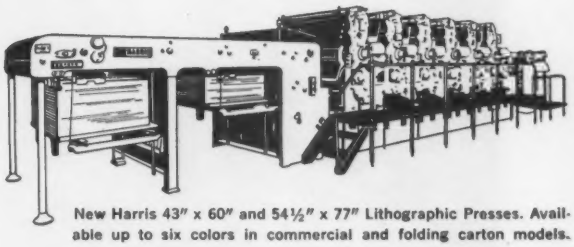
This is the moment of truth. Everything you and the press may have accomplished in lithographing the sheet depends, ultimately, on the completeness of control at the delivery end. This is the final answer to more salable sheets per hour, per man, per day . . . to more profitable production.

Harris has achieved sheet stabilization and hairsplitting register from feeder pile through transfer and lithographing. Now, in the Delivery Control Zone, as many as nine more watchdogs guard the safe arrival of paper or board stock at speeds up to full press capacity.

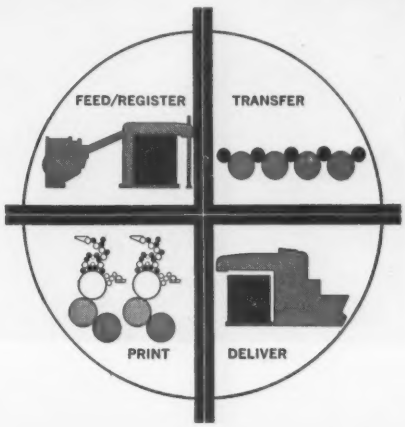
In each of four key zones, Harris design elements "sense" and respond quickly to variations in materials, to changes in operating conditions. Factors that cause down time and affect quality are under control every inch of the way.

This is Harris *Control Zone Design.*

It will keep your next press up to date for years to come. Ask your Harris representative to tell you about the Control Zone features—important reasons why a man does his best work on a Harris.



New Harris 43″ x 60″ and 54½″ x 77″ Lithographic Presses. Available up to six colors in commercial and folding carton models.



HARRIS INTERTYPE CORPORATION

HARRIS-SEYBOLD

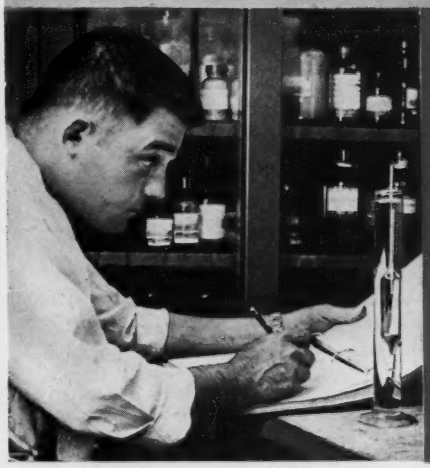
A Division of Harris-Intertype Corporation

4510 EAST 71st STREET • CLEVELAND 5, OHIO

BALDWIN® WATER LEVELS are indispensable to good water control and are made in a variety of sizes to meet the needs of *any* press . . . *your* press. Write today for illustrated literature on water control. Baldwin-Gegenheimer Co., Inc., 80 Roebling Street, Brooklyn 11, N. Y. Phone: EVergreen 8-5610.

IMAGINATION

AT WORK FOR LITHOGRAPHERS



That beaker on your table may seem of no great importance — yet it is a symbol of a basic fact in the production of good lithography — the ability to measure. Devising new and more accurate measuring for the control of chemical components is certain to result in better offset reproduction. That's why the trained chemists in the LITH-KEM-KO laboratory are ever alert for better measuring devices — that's why the new LITH-KEM-KO "Aqua-Check Kit" was developed. It will help lithographers measure the amount of water in alcohol so that results in the deep etch process can be controlled and good quality in the finished sheet can be assured.

AQUA CHECK COMPLETE KIT . . . $5.00
AQUA CHECK REAGENT SOL. . . 4 OZ. BOT. . . $2.00 PER BOT.

LITHO CHEMICAL and SUPPLY CO., Inc.

46 HARRIET PLACE • LYNBROOK, NEW YORK ● 4227 WEST 43rd. ST. • CHICAGO 32, ILLINOIS ● 1418-22 SANTA FE AVE. • LOS ANGELES 21, CALIF.

YOU

Can have hourly cost rates for every operating center in your plant . . .

- *Built on your wage, hour and fringe costs, your administrative and selling expense, etc.*
- *Built on actual or budgeted productivity, department by department*

This is one of the key services, the National Association of Photo-Lithographers renders to its members. The NAPL has set up costs for hundreds of small, medium and large lithographic and combination plants.

Up-to-date, hourly cost rates for your plant will provide you with insurance for the period ahead.

Fill in, sign and mail the coupon below, to ascertain how you can secure Hourly Cost Rates for Your Plant.

National Association of Photo-Lithographers
317 West 45th Street, New York 36, N. Y.

Gentlemen:

We would like to have more information on setting up budgeted hourly cost rates for our plant. Our annual sales run approximately $.....We operate..... lithographic presses.

Name..... Signature.....

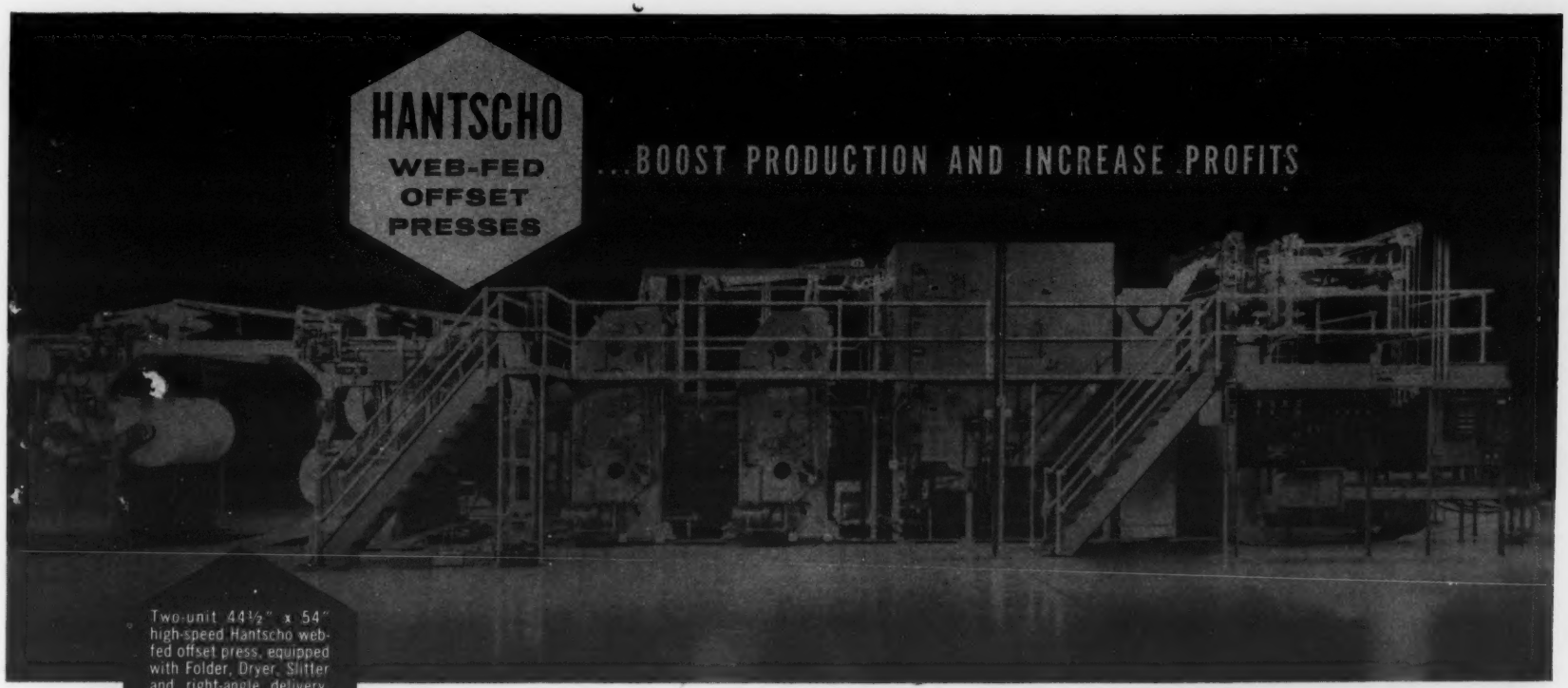
Firm.....

Address.....

City, Zone, State.....

HANTSCHO WEB-FED OFFSET PRESSES

...BOOST PRODUCTION AND INCREASE PROFITS



Two-unit 44½" x 54" high-speed Hantscho web-fed offset press, equipped with Folder, Dryer, Slitter and right-angle delivery. Wood Reels, Tension and Autopasters complete the installation.

HANTSCHO presses are RIGHT in design, performance, quality, price.

We invite inquiries from responsible firms regarding Hantscho custom-built presses.

You can rely on Hantscho presses to produce *QUALITY* printing at high speeds.

These outstanding presses are custom-built to meet the user's exact requirements in any number of units for roll-to-roll or roll-to-sheet printing. Leading publishing firms and commercial printers who are producing highest quality multi-color printing, are high in their praise of their Hantscho press equipment.

GEORGE Hantscho CO., INC.

602 SOUTH THIRD AVENUE MOUNT VERNON, NEW YORK

MIDWEST REPRESENTATIVE: 153 WEST HURON STREET, CHICAGO, ILL.

NEW Ansco Reprofix®

ANOTHER FINE CHEMICAL JOINS THE DISTINGUISHED ANSCO LINE

Here at last is a fixer that offers more in terms of long life and clean-clearing dependability. New Ansco Reprofix costs no more than conventional acid fixers, but what a difference in performance! Clean working, easy dissolving Reprofix is a must for every critical worker who wants the newest and most dependable in fixers! Available in 1 gal. and 5 gal. units. Ansco, Binghamton, New York . . . A Division of General Aniline & Film Corp.

Ansco Reprodol® Developer. The industry's standard for a high density, superbly stable graphic arts developer. When used with Ansco Reprolith emulsions, maximum density and high contrast are assured.

Ansco Stay-Flat Solution. A special adhesive preparation which provides a practical and efficient method of supporting film evenly and securely.

Ansco Stripping Film Cement. A quick drying medium that creates a firm bond between membrane and support material.

Ansco
Chemicals

RUBYLITH

THE FAMOUS RED MASKING FILM ON MYLAR* THAT SIMPLIFIES PLATE MAKING • DROPOUTS • OVERLAYS OPEN WINDOW NEGATIVES • COLOR SEPARATION

"Remarkable Rubylith" . . . that's what leading graphic arts specialists are saying about this versatile masking film.

amberlith

A companion film to Rubylith — Specifically created for Overlays and Camera Copy.

VALUABLE TECHNICAL MANUAL AND WORKING SAMPLES ARE YOURS FREE.

Ulano
GRAPHIC ARTS SUPPLIES INC
OPEN WINDOW NEGATIVES • DROP-OUT • MASKS • OVERLAYS
CAMERA COPY • COLOR SEPARATION • ART PREPARATION
RUBYLITH • AMBERLITH
The New HAND-CUT MASKING FILMS for the GRAPHIC ARTS

Write today for Your Copy of this Manual and FREE samples of RUBYLITH and AMBERLITH

LITHOGRAPHIC TECHNICAL FOUNDATION

*TM. Dupont-Polyester Film

Used by Leading Lithographers, Engravers, Screen Printers and Art Studios throughout the World.

Ulano

GRAPHIC ARTS SUPPLIES, INC.

610 DEAN STREET • BROOKLYN 38, N. Y.

NOW available in larger sizes 3M Type "L" Photo Offset Plates

...the only completely flexible plate designed to give you two usable aluminum printing surfaces!

You asked for it—and now 3M has made the sensational 3M Brand Type "L" Plate available in six larger stock sizes—from 8½" by 12" to 15⅜" by 20½". Special Type "L" Plates can be produced, too, up to 350 square inches. Remember, only the 3M Type "L" Photo Offset Plate—in any size—gives you two usable, precision pre-sensitized printing surfaces...and both of them perfectly smooth aluminum. It's an economy and quality combination you can't get on any other duplicator plate on the market! Call your 3M Lithographic Supply Dealer now and place your order.

3M
PRINTING
PRODUCTS
DIVISION

Chemical Graining

Dear Sir:

We have been subscribers to ML for many years, and wonder if you can give us the answers to several technical questions:

1. We have heard about chemical graining of plates. How is it done?

2. Still on the subject of plates, there is a lot of talk about anodisation. What are the working principles of this treatment? Is graining eliminated?

Carville Fotolithografia
Barcelona, Spain

Our technical editor reports that chemical graining, including anodising, is a treatment usually given metals for presensitized and wipe-on plates. This is a mass-production, factory operation. We are not aware that such treatments have been advocated for in-plant use. Anodising, is, to the best of our knowledge, accomplished by electrolysis. Further information on anodising may be available from one of the aluminum companies.—*Editor.*

Error In Caption

Dear Sir:

We were pleased to see in your September issue that you thought your readers would be interested in the fast footwork

which made it possible to run a photo inside a recent issue of Merrill Lynch's *Investor's Reader* magazine, showing the cover sheets for that same issue as they came off the press.

But we feel duty-bound to point out that the gentleman on the right in the photo is not Mr. Henry Hecht, editor of *Investor's Reader*, as identified in the caption. Instead, it is Mr. William Palinski, production manager for Western Printing and Lithographing Co. in Poughkeepsie. He's the man who coordinated operations at the Western plant.

Fred W. Baker
Harris-Intertype Corp.

Meetings

Web-Offset Section, PIA, annual meeting, Edgewater Beach Hotel, Chicago, April 19-21, 1961.

Lithographers and Printers National Association, annual convention, Arizona Biltmore Hotel, Phoenix, Ariz., April 30-May 3, 1961.

National Association of Litho Clubs, 16th annual convention, Dayton Biltmore Hotel, Dayton, O., May 4-6, 1961.

Technical Association of the Graphic Arts, 13th annual meeting, Hotel Deshler-Hilton, Columbus, O., June 12-14, 1961.

National Association of Photo-Lithographers, 29th annual convention and exhibit, Hotel Commodore, New York, Sept. 27-30, 1961.

Printing In V.I.

(Following are excerpts from a letter to the editor from the former president of the NALC, written during a recent vacation trip to St. Thomas, Virgin Islands.)

. . . There is one print shop on the island, called Island Press. A man named Jerry Anderson, from Connecticut, owns the plant. He said he formerly owned a plant in that state. . . . He is up on all phases of the graphic arts. His specialty is typography, and he has attended three

(*Continued on Page* 141)

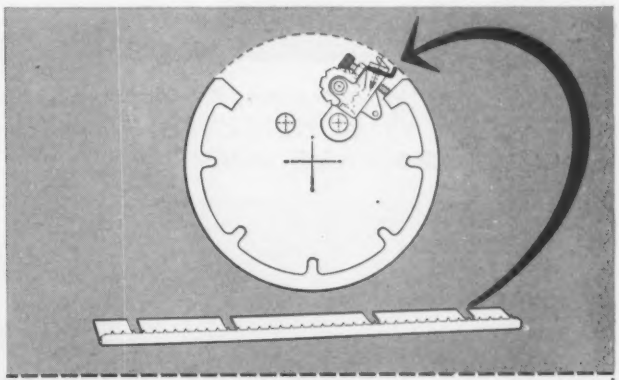
FREE

of extra cost

NEW PLATE CLAMP ATTACHMENT

with an order of
100 3M Brand Type "L" Plates

This unique Plate Clamp Attachment fits under the leading edge clamps of the cylinder on your press. It holds serrated or pin bar offset duplicator plates securely in position—in register—all during the run. Designed for use on Multilith presses with hinged or rigid clamps.



PRINTING PRODUCTS DIVISION

R. G. Allen, 42-5W, Printing Products Division
Minnesota Mining and Manufacturing Company
Dept. PBI 110 St. Paul 6, Minnesota

Yes! I would like to have a Plate Clamp Attachment for my

_____
MAKE AND MODEL PRESS

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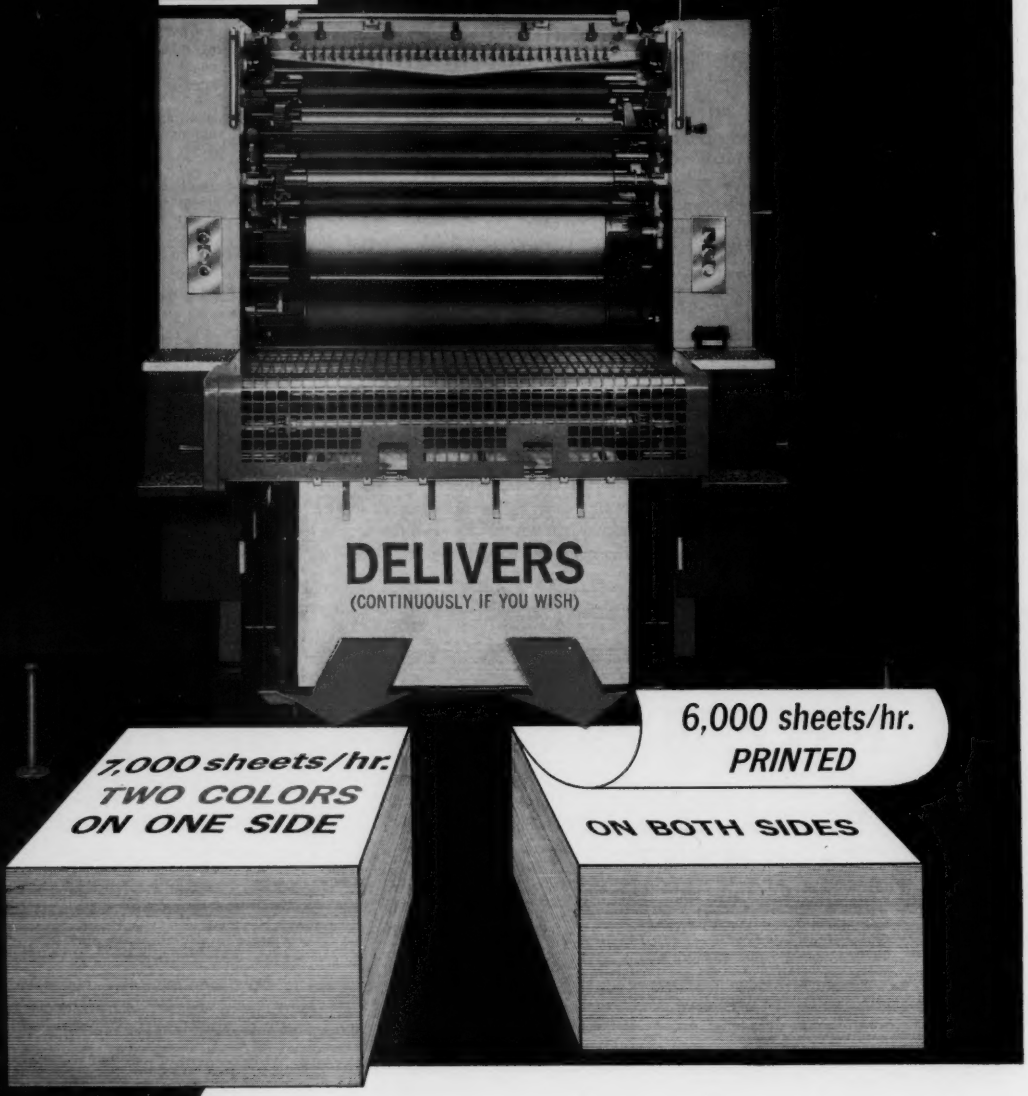

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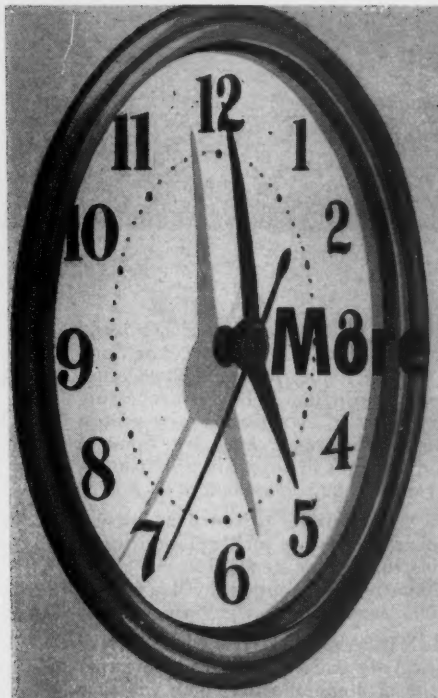

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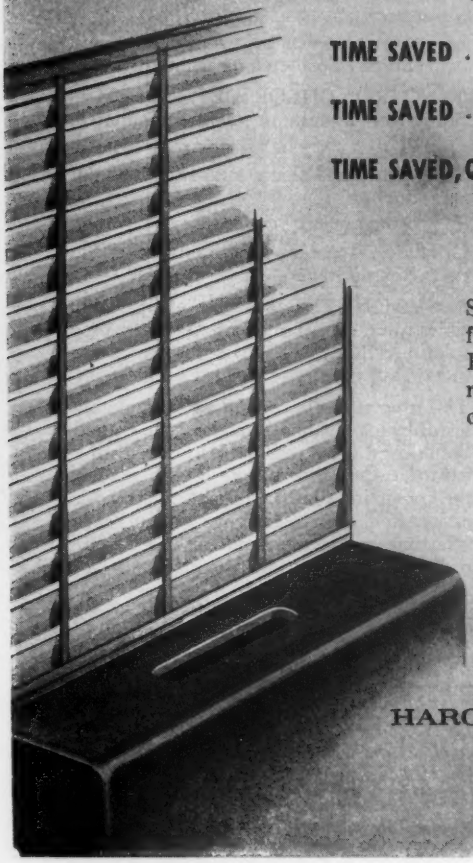

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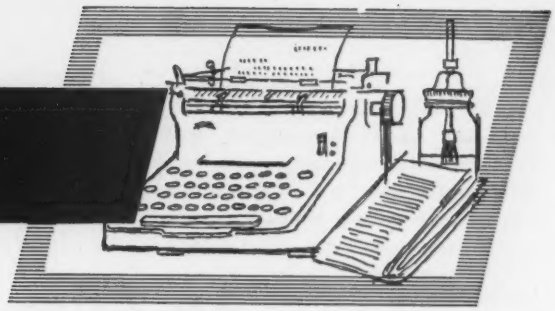
EDITORIALS



Cash on the Barrel Top, Please!

THE presidential election will have been decided by the time this issue reaches our readers. We hope that you were perspicacious enough to pick up some cash by backing the winner. If not, we hope that in doing national or local political printing, you at least had the foresight to demand cash on the barrel top.

In the bad risk department, political parties that finish second often lead the list.

Despite the "Great Debates," both parties found need for tons and tons of booklets, pamphlets and throw-aways to promote the cause of everything from presidential candidates down to aspirants to the town council.

Perhaps it's a bit late to be warning lithographers that there's no guarantee in either party's platform about paying for political propaganda, and that credit sometimes fades rather rapidly—along with campaign promises—right after the first Tuesday after the first Monday in November!

NALC On the Go

VETERANS of many an NALC convention battle were understandably enthusiastic following a special meeting in Chicago last month of the officers, past presidents and standing planning committee. And their excitement was well justified, because the group finally got down to the brass tacks of hiring a permanent secretary and headquarters. (See story, page 76).

As though this achievement weren't enough, they also gave strong approval to an educational program that may turn out to be the single most important thing the National Association of Litho Clubs has ever done for is members.

It must be noted that final details of both projects have not yet been worked out.

The educational program, it was explained, will be focused at the foreman level, with several hundred lithographers from the more than 30 clubs eligible to take part in the program, tentatively set for the University of Michigan. The program will probably include a five-day seminar with a choice of related correspondence study courses. (Look for complete details in Rae Goss's NALC column in our Litho Club section in coming months.)

By these two moves, NALC should go a long way toward eliminating the frequent internal dissension over dues, procedural matters, etc., and help the nationwide organization to fulfill its promise.

ML, which regards itself as the NALC's best friend and (sometimes) severest critic, is happy to congratulate the group on these important steps!

Shortage of Printing

JUST as it is the dream of every editor to put out an issue devoid of typographical errors, so it is the goal of every association official to attract so many persons to a convention that the supply of registration blanks will be exhausted.

The former pipedream just never comes off, but the latter *did* last month. Walter E. Soderstrom, of NAPL, happily reported that so many industry members jammed the Conrad Hilton Hotel in Chicago last month (more than 5,000) that all the printed forms were used up!

Full details on this record-breaking convention and exhibit may be found elsewhere in this issue.

Quote of the Month

'This action means better communications and liaison with the member clubs and a strengthening of our common purpose'—Rae Goss, NALC president (See page 55).

An Easy Way To Lithograph

By *Richard I. Gahler*
Louis F. Dow Co.,
St. Paul, Minn.

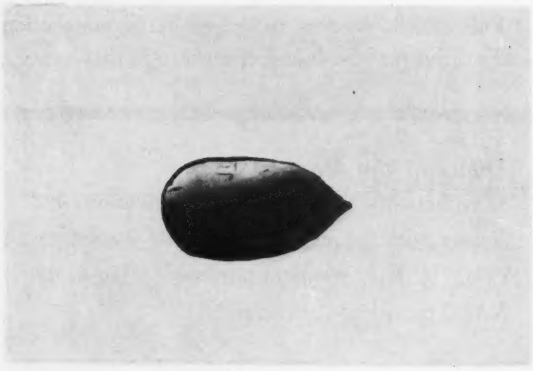
A GREAT number of lithographers are printing envelopes on large flat sheets of paper, then cutting and later folding them into shape. This method is accepted now, but the fact remains that lithographing envelopes in this way requires skilled care in placement of images and sometimes results in increased costs.

After the envelope is die cut, folded, gummed and all prepared, the image has to come out straight with the folds and must be in the right place.

Printing envelopes that are already shaped has advantages in that the placement of images can be made easily and accurately. It is necessary for return addresses to be placed just right on the envelopes, because of postal regulations. Also, correct placement determines the quality of the job. When matched stationery is the order, the return address has to be placed correctly in order for the envelope to match the letterhead. Lithographing prepared envelopes can be more economical too, and I will show that it can be done on a small offset press.

Letterpress printers have had most of the envelope business because they run envelopes with type and flexible cuts. They print over flaps, folds and creases. But take a look at some of their work. Printing buyers purchase exquisite letterheads in color of the highest quality, and then send them out in envelopes that look like they have been printed from worn rubber cuts.

Small piece of rubber packing glued on back of blanket, shaped with a point toward the lead edge, to absorb shock of envelope near the flap.



Running Envelopes on Small Press

I would like to pass on to you some points that have enabled me to lithograph envelopes successfully and easily on a small offset press. I'm sure that any good small offset press will do the job.

Sure, there are problems, but they can be overcome. One of the first problems in running envelopes is in the feeding. Only one sucker should be used on the offset press. On some presses, the envelope flap will be up and probably will catch somewhere on the feed table. To solve this, place contained steel marbles where they can roll over the flap and hold it down. For close register, place a contained marble so it rolls on the envelope near the side guide or where the envelope enters the gripper. The press should be run a little slower this way.

In the actual printing, a regular blanket will not do the job. For one reason, smashed blankets may result from the double or triple thickness of paper near the envelope flap. You can solve this by sticking rubber packing on the back of the blanket. Packing may be made from pieces cut from an old blanket or from some other resilient material. Make sure the packing adheres to the blanket and doesn't shift or wrinkle.

An Iowa printer has been cutting his blankets lengthwise and using only a strip of blanket on the drum. This strip can be turned end for end, too, giving at least twice as much envelope printing per blanket.

Setting the right pressure between blanket and back cylinder is important when packing is used under the blanket. A trick is to start with the least possible pressure and gradually increase it until good printing is achieved. It may be advisable, on the offset press, to take all packing from under the brass on the back cylinder.

Chances are, printing most envelopes between cylinders like this will cause wrinkling problems. The squeeze on

Pre-Shaped Envelopes

Printing envelopes that have already been shaped makes image placement much more accurate, and the job isn't hard to do, if you follow a few simple tips from author Gahler, who has had wide experience in lithography, composition, estimating, and letterpress. He has studied at University of Minnesota and Dunwoody Industrial Institute.

certain rag-content envelopes forces all the crinkle and curl to the tail end of the envelope, leaving wrinkles. To solve this wrinkling problem, try reversing the envelope so that the printing is on the lead edge. This, of course, would require a plate with the image on the lead edge. Then you can cut away all blanket packing from the tail end, where no printing is being done. This will usually end the tail-end wrinkling.

Since air is usually trapped in the envelope as it goes through the press, slurs as well as wrinkles may result. One way to solve this is by putting one or two pieces of tape at a point on the back cylinder where the printed image on the blanket meets the back cylinder. By experimenting with the size of tape, thickness and shape that it has, you can find out how to control the trapped air by packing pressure from this tape.

An additional and most effective way to solve slurring is to cut holes in the blanket packing (not the blanket). This allows room for the trapped air to escape. Cut the packing around the image. A method of marking this area underneath the blanket is by circling it with a pencil, while observing the front of the blanket where the point of the pencil is impressing. You can coordinate your hand and the pencil this way, even though both are out of view. Be careful not to press too hard as this may punch harmful holes in the blanket.

Shaping the Blanket Packing

Shape the packing so the air will be channelled around the image area. If the packing is shaped with a point toward the lead edge, it will diverge the air in a manner similar to the way the front of a boat diverges the surface of the water. Or you can diverge it in any other way that seems feasible to you. But keep in mind what is actually happening to the envelope as it passes through the cylinders. If you ran an envelope through the rollers of your wife's washing machine (if it has any) you would see plainly how the trapped air causes the envelope to wrinkle.

Extra packing strategically placed elsewhere under the blanket will help distribute pressure to increase the life of the plate. Screened areas and fine dots on the plate will not stand up as well with packing under the blanket, so a few smaller pieces around the image area will help absorb the pressure. Also, by applying long run lacquer, a plate should last almost as long as on a normal stock printing run.

Applying ink and fountain solution on an envelope run would be slightly different from applying them when running regular paper stock. The main thing to remember is that both ink and solution normally must be reduced on the edges, where nothing is being printed. The ink, of course, can be greatly reduced there.

Incidentally, stiffer inks will usually produce better results. When all other solutions for slurring have been tried unsuccessfully, it has sometimes been found that a stiffer ink will do the job.

Controlling the Fountain Solution

Controlling the fountain solution is a touchy business. The solution can be wiped off, with some small presses having wipers attached for this purpose. The printed image on the envelope may be just right, but yet there may be too much water on the edges. This should be watched carefully, as the solution will eventually work inward and leave yellow stains on the envelope. These stains have been called oil or grease stains by customers.

Printing envelopes on a small offset press like this is a little slower. The feeder can hold only so many, and the press must be reloaded often, usually after 500 or so. This may seem tedious and unnecessary at first, but after practicing and discovering short cuts, it is possible to do 5,000 an hour easily. However, the main concern should be quality of the work. If the job is stripped up properly and the plate is made well, the printing job can be of the highest quality.

I will say in conclusion, that the best looking envelopes I have ever seen were printed in this manner. All the advantages of offset are put into the printing. Halftones, color line work, and even color process can be used. What printing buyer wouldn't look twice if he saw his own fancy letterhead properly reproduced exactly on an envelope, in reduced form? More paper and envelopes will be printed in the next 10 years than ever before in history. Lithographers can get in on the envelope as well as the paper orders. ★

Some Photographic Tricks You Can Use...

By *Frank H. Smith, F.R.P.S.*
Monotype Corp., Ltd.
Salfords, Redhill, Surrey, England

First may I express the deep sense of loss felt by a great many graphic arts cratfsmen in Britain, and indeed in the whole of Europe, at the news of the death of Mr. J. S. Mertle. Just as the Photographic Society of America was glad to have him as a Fellow, so we of the Royal Photographic Society in London were proud to number him among our Fellows for the outstanding work, amounting to sheer genius, which he pursued throughout his full and happy life. He was the greatest critic, historian and bibliographer that the craft of illustrated print has yet produced and, unless another such arises, his loss will be more and more keenly felt as time goes on.

It is the tragic death of Mertle that has prompted me to write of some of the problems that we meet from day to day, the minor emergencies which tax one's craft knowledge and ingenuity to overcome them, and how we never know whether the solution will be found in the early history of our craft or in one of the newest and most recent inventions. Mertle was one of the strongest advocates of a study of the historical and theoretical bases of our work to fit ourselves to conduct our busines with efficiency, economy and success.

IT MUST be 20 years ago that I first wrote about the methods of using copper bromide and hydrogen peroxide as a means of converting a negative photographic image to positive(please excuse the obvious conceit but it was the first and only time that I ever beat Mertle to it in finding a modern use for an historical process).

We are all well aware of the "image-etch reversal" technique nowadays, but I was startled then to find that the process was being acknowledged to me as the inventor (but not by Mertle, who knew better!). I realized that I must have failed to state the source of my information and I at once wrote to the editor of the journal pointing out that I had found the formula in an old copy of Wall's *Dictionary of Photography* dated 1904! I believe the method was invented by Colonel Klein, who was a pioneer of color photography in those days, and one of its uses was in the old "Pinachrome" process which was a dye-transfer color print method. It may surprise many readers to learn that both those "new" techniques date back over half a century!

The revival of "image-etch" came at an opportune moment, for it had been something of a curiosity up to that time. It did not work very well on the thicker, more grainy photographic emulsions previously available, but on the fine grain, high silver density, thinly coated emulsions which were then coming into use—and particularly on 'lith' emulsions, it worked perfectly and became a standard item of our technical "know-how."

Image-Etch Technique

We are all aware of the obvious purpose of using the image-etch technique for converting a developed negative image into a positive (or vice versa), but there are quite a few other useful tricks that can be accomplished with the method. For instance, if a job is required to be particularly accurate as to size and squareness, but also laterally reversed, then an image-etch reversed contact print from a "straight-on" negative is an excellent way of achieving the result, for there is no danger of distortion from a reversing mirror or prism which may not be at *precisely* 45 degrees. Further, the "cast iron" quality of the reversed line or halftone image is superb and halftones will stand quite a bit of dot-etching if necessary without losing density, also of course the negative can be corected before it is contact printed and reversed and any opaquing is a clean silver image solid in the result.

Again, one may have a line drawing or some lettering which is required to be perfectly white in a halftone illustration (or in another line image). We can first make a negative of each (prism reversed, if necessary). The line negative is then contact printed, developed and image-etched in the darkroom, using safelight and no white light. After a short wash, the film (or plate) is dried in a dark cupboard and is then exposed

under the halftone negative, developed, fixed, washed and dried to produce the required halftone positive containing the reverse lettering or line design.

With careful registration of each image, or better, by using a step-and-repeat machine, the method works very well for cutting out images in a color set. Of course we would need a good reason for working in this way; perhaps that the set was to be sent elsewhere for printing-down, because the same result can be obtained quite effectively by gum dichromate deep-etch reversal methods, but it is always useful to know of more than one way of tackling any given problem. We are bound, sooner or later, to find a case that is best suited to the other technique.

'*Artful Piece of Skullduggery*'

I recently saved an important job with an artful piece of image-etch "skull-duggery" upon which I am still congratulating myself. The solution was simple, but I thought of it at just the right time. An electronics wizard was working with me and we had made about 400 separate step-and-repeat exposures from nine different negatives on one photographic plate for the memory bank of a computer (we did the work on a Lithoprintex Junior machine).

We had made a contact print of the stepped up images, centered the plate back into the machine and had very precisely scribed some further details into the image, following with a further contact print on which we filled-in with opaque in some of the wider areas (oh! it was a complicated job, right enough!). Then, when we were about to complete the job by making an image-etch reversed contact print, the electronics man smote his brow and said "Good Lord! those scribed center marks ought to be transparent and not opaque! We'll have to do the whole job again!" This

(*Continued on Page* 141)

Fig. 1: Top—Example of the kind of job in which the register crosses were required transparent and not opaque. **Middle**—Contact print made from top illustration was developed and stop bathed to get this result. Shaded portions show where register cross portions were painted over with cellulose so that further processing did not affect them. **Bottom**—Middle print was then image-etch reversed and staging paint was washed off from register crosses to produce this result.

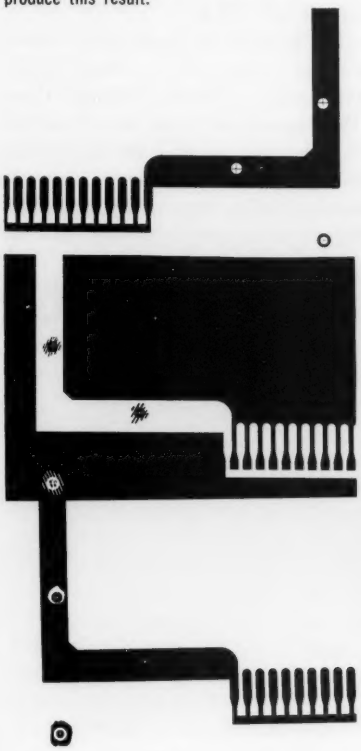
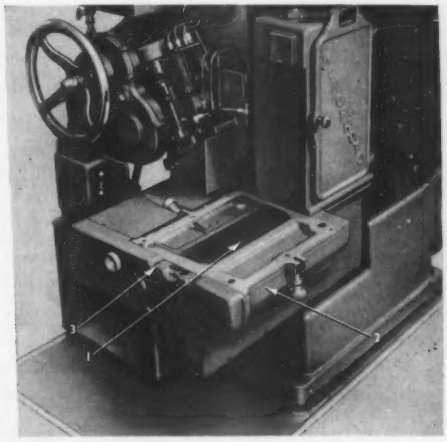


Fig. 2. Technique used to produce illustration in which arrows would be in black with white "shadow" outline. Halftone negative was made from each photo and a line negative of the arrows, etc. Next, Autopositive film was utilized, as explained in the article, to get the desired result.



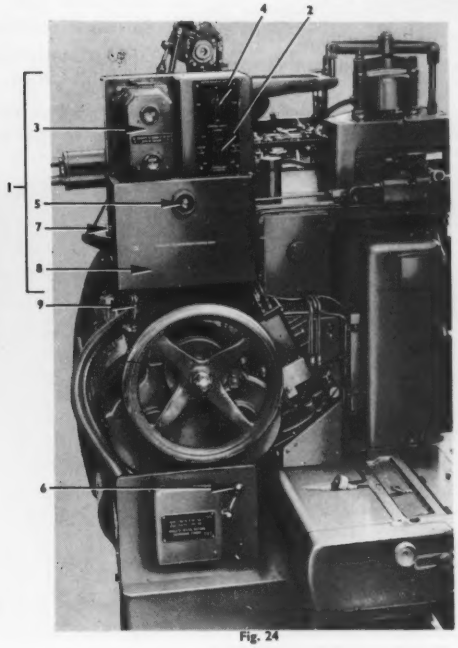


Fig. 24

Fig. 23 (*above*).
Mirror box with dust cover in position (film box removed).

1 *Dust cover*
2 *Mirror box*
3 *Line feed mechanism*

Fig. 24 (*left*). Front of machine, showing electrical controls.

1 *Complete electrical control panel*
2 *Control switch*
3 *Stop-and-start switch*
4 *Motor isolator switch*
5 *Warning lamp*
6 *Main switch*
7 *Screws (2) retaining cover 8*
8 *Control panel lower cover*
9 *Air cock*

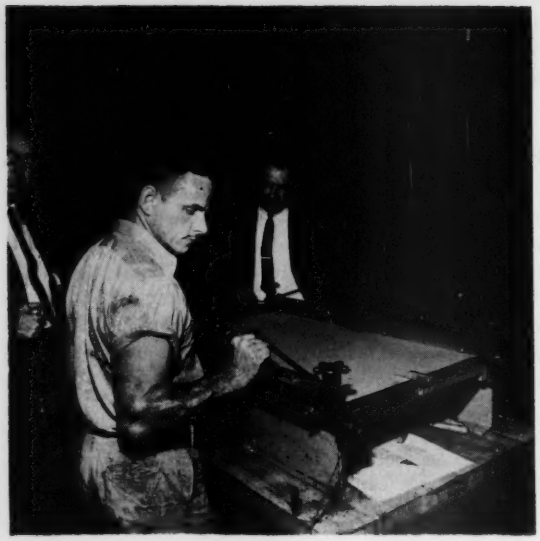


Plate-bending device is simple and accurate, with hairline register of plate and cylinder assured.

some basic facts on

Web-Offset

THE ROLL STAND of a web press has the same function as the feeder on a sheet-fed machine. Rolls of paper are mounted on the stand and threaded through the complete press. . . . Threading is normally in a straight line unless multiple webs are being run at the same time. The roll stand may be located in line with the printing units—or at the side—depending on the number of webs to be used, or space limitations, or both.

As the web unwinds from the roll, it passes over several *metering rolls* which smooth it and maintain proper tension and speed as the paper is fed into the printing units. Before the web enters the first printing unit, it may pass through a cleaning device to remove any foreign particles that might damage the plates or blankets.

The web passes between *two blanket cylinders*, each acting as the impression cylinder for its mate in the printing unit. Control of the web tension in both the lateral and running directions is an important factor in maintaining register.

The manner in which these controls are effected is an important part of the mechanical advantages that distinguish one make press from another. The problem is to adjust the tension just enough to prevent the web from trying to follow the blanket but without wrinkling the web.

Cylinders are laterally adjustable while running to maintain register if there should be any weaving motion of the paper. As in sheet-fed presses, the cylinders can be advanced or retarded—within certain limits—in order to secure original register and to help maintain it during the run without down time.

This material is reprinted, with permission, from the new booklet "Miehle Web-Offset Perfecting Presses," published by the Miehle Co., Division of Miehle-Goss-Dexter, 2011 Hastings St., Chicago 8, Ill. Complete copy of the booklet may be obtained from Miehle.

Generally, web-offset uses heat-set inks. As the web passes at high speed from the last printing unit, it enters a *drying oven* through which it passes perfectly free and suspended by air. Ovens may be electric (rare) or gas. The gas drying ovens use either city gas or bottle gas, and their length is dependent upon the speed at which the press is to be run, the type of stock and the amount of ink coverage. The longer the oven, the less the amount of heat that has to be applied at one time. The web passes between burners both top and bottom, after which a series of air blasts is blown against it to stir the volatile gases and promote the carrying off of solvents, thus raising the temperature at which the ink will dry.

After the web leaves the dryer, it passes over *cooling rollers* (sometimes called "chill rolls"). These usually have cold water continuously circulating through them, in order to reduce the temperature of the paper from the approximately 350° of the oven to below the drying temperature of the ink—80° or 90°. Sometimes, when the paper is too thoroughly dried, a steam roller or similar means is also employed to put moisture *back into* the paper.

Some presses are equipped with imprinting units following the cooling rollers. These use rubber letterpress plates to print on one side of the web only. Numbering devices can also be installed if desired.

The web then continues to the folder, sheeter or onto a rewind stand.

Most of the work produced on the type of web press under discussion proceeds to a "*former*" *folder*, where various combinations of folds convert the web into a finished signature ready to be gathered, bound and trimmed.

As the web progresses through a *former folder*, the outer edges are brought together over a "former" to make a fold parallel to the direction of the web, and the moving web, now folded to half its original width, then passes down between the two cylinders of the first parallel folder for cut-off and to make a second fold parallel to the cut-off.

Here, briefly, is how the parallel folder works:

As the web passes between the folding cylinders, the lead edge is caught on pins and is carried around the cylinder. The tail edge is still attached to the web.

Halfway through, tucker blades on the cylinder with the pins force the center of the signature into the folding jaws of the adjacent cylinder.

At this time a cut-off knife severs the signature from the web. However, the following web is still under control after the cut, because the second set of pins in the cylinder has already grasped what will be the lead edge of the following signature.

The pins, which have been holding the first signature, now retract, and the folded signature is carried around the cylinder—held by the jaws—ready for either delivery as an eight-page signature or onto another folding operation.

After the parallel fold, the signature can proceed into either another parallel fold unit (parallel folder) to make a fold parallel to the preceding one, resulting in a long narrow 16-page signature . . . or it can proceed into a cross folder (or "*chopper*" *folder*) where it receives a fold at right angles to the parallel fold to become a 16-page signature of different imposition . . . or it can bypass both folders and be delivered simply as an eight-page signature.

Other special types of folds are possible, too—the ribbon or angle-bar fold, for instance. In this case, the former fold is bypassed and the web is slit into two, three or four ribbons which are conveyed over angle bars and brought together at the parallel folder. Here they are folded into a 12-page signature that measures ½, ⅓ or ¼ the web width x ½ the circumference of the cylinder. It can then go into the parallel or chopper folder as required.

Other operations which can be accomplished at the folder are scoring, cross perforating, schoolbook perforating and pasting.

What Are Web-Offset's Advantages?

Web-offset, for many classes of work, has definite economic advantages over sheet-fed offset, and should be carefully considered before an intelligent buying decision can be made.

The most important economic advantage is web's *high productivity*. By producing more work in less time, costs per job are reduced and more press time is made available for additional work.

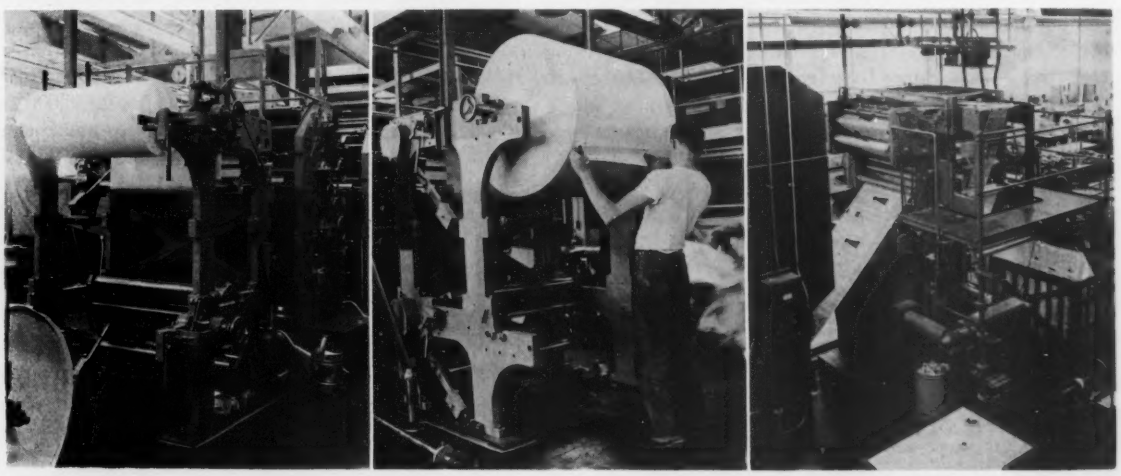
On the basis of *running speed* alone, web-offset is two to four times as fast as the best sheet-fed machines, regardless of the number of colors. On a blanket-to-blanket perfecting press this relationship doubles, because both sides are printed at the same time. And there is no dollar-eating down time for replating, turning skids and refeeding to print the other side, as there is on a sheet-fed machine!

Incidentally, a 30″ roll of paper runs a little more than an hour at average press speeds, a 40″ roll about two hours. The use of multiple roll stands and flying pasters can speed the operation even more.

Operating, adjustment and maintenance simplifications also serve to enhance the attractiveness of web. There are no complicated sheet feeders, no sheet guides, no special feed-in devices, no grippers, no transfer cylinders, no anti-offset spray, for example. With web-offset there is no real drying problem; a web cleans easier than a sheet; curl problems are considerably reduced; and static causes few difficulties except when sheeting.

Web-offset saves considerable costs by *combining several operations* in one machine. Unlike sheet-fed offset, perforating, pasting, scoring and imprinting are easily accomplished on the press. In addition, completely folded signatures are the usual end product, ready to be gathered, bound and trimmed without delay. These operations, otherwise performed separately in the bindery, thus become an automatic by-product of printing. Less total floor

Left: View of dual roll stand, showing heavy construction and metering unit layout. **Center:** Pasting new roll onto depleted web. Control at left is used for top and bottom rolls when two webs are used. **Right:** Overall view of folder arranged for ribbon fold. Work from all fold sections delivers out onto same conveyor for easy handling and packing of finished pieces at the end of the presses.



space is preempted by equipment, less equipment is required, no skids are standing around for the next operation, no extra bindery personnel are needed. In a great many cases both *printing and folding* on a web press actually costs little more than the price of sheet folding alone.

There are *two paper economies* of web-offset. First is the obvious one of the lower cost of buying paper in rolls —10 to 20 per cent savings. The other factor is that lower quality paper can be run efficiently on web-offset . . . letterpress enamels and lightweight stocks are two examples. This is because the web process uses less water, thus requiring less water repellent coating on the paper. And many mills are now developing special quality low cost papers specifically for web-offset.

An economy derived from the nature of the process itself is that web offset requires *less water and less ink.* The reason for less water is that the cylinder design virtually eliminates cylinder gap and, combined with exceptionally high speeds, permits less water accumulation on the sheet. The use of heat-set inks means that most of the ink sets on top of the paper. Less penetration of the paper means a greater density of pigment, results in brighter colors for a given amount of ink, or less ink to achieve the same color.

In many areas there is the additional advantage of lower manning costs . . . but this is a local condition.

Also, if web offset is compared to gravure or letterpress, it has the same advantages as sheet-fed offset, mainly that the plates are economical and get-away is fast. For instance, a 4/4 press (four perfecting units) can be completely replated and under way in less than 1¼ hours (eight plates!) depending on register. This indicates that web can be effectively used for short-run work. One case on record involves a shop that found it necessary to run jobs as short as 1,000 on its web-offset press when other equipment was out of commission. It was four-color work —no register—and the output involved 75 plate changes a day. There was no loss on these jobs!

These, then, are the most important economies of web-offset resulting from high-speed production, simplified operation, lower raw material costs and the combining of printing and bindery functions.

Some Disadvantages of Web-Offset

There are some obvious problems which may arise in web-offset, just as in any other process; no one method is right for every job. But if web is right for a given plant, the problems become relatively minor.

Heat-set inks can be troublesome when ink builds up on the blanket during catch-ups. If a web is used that is narrower than the capacity of the press, the entire blanket does not get cleaned, and a band of ink—often quite tacky—will build up on each side of the blanket. This, too, can be controlled by ink fountain dividers and by attentive pressmanship.

It has been said quite often that quality printing comparable to the best of sheet-fed work cannot be produced on a web press. This, too, depends on skill and technique as well as operator care (a few plants are outstanding), but in general it is probably true at this stage. There is, however, a tremendous market for good web quality commercial work. And with equal quality paper, inks and pressmanship, quality every bit the equal of sheet-fed offset is possible.

The problem of pressmanship is, unfortunately, an important one today, because there are relatively few trained web-offset pressmen. In almost any plant installing web today the pressman starts pretty much from scratch, and it is the nature of the industry today that many men who are briefly trained into a press crew move on to become the number one or two men in new installations. On the other hand, because of the simplicity of web equipment, many pressmen have indicated that they learned web-offset much faster than sheet-fed.

Probably the most often discussed drawback of web operations is that it is limited in scope. For instance, a web press of 22¾ x 36″ can print any width up to 36″ but can deliver only the equivalent of a "sheet 22¾″ in the around-the-cylinder direction. Of course, smaller jobs can be printed, but the difference in size up to 22¾″ is wasted paper, unless they are divisible into this size, or unless other work can be dropped into the blank area, such as calendar pads. Also, a one unit press can print only one color on each side of the web . . . it cannot be run back through the press for additional color work.

While this limitation is obvious, the web press is still suprisingly flexible. With its ability to anglebar the web, multiple webs are easily run through the press. Thus it is possible to print a four-color, four-page cover and a 16-page, two-color insert at the same time through the same press, gather and collate it at the folder, and deliver a finished booklet ready for saddle binding. By various threadings of the press and by ingenious use of imposition and layout, a great variety of work can be done.

Basically, for many classes of work, the advantages of web-offset far outweigh the relative disadvantages. In fact, in most cases the so-called drawbacks are quickly overcome by talented pressmanship and ingenious supervision of the printing operation, not to mention the intelligent selection by the user's salesmen of the proper customers for the product of the press.

Who Should Consider Web-Offset?

Generally, web-offset has application for the 5,000 to 50,000 and up to even 250,000 run of single or multi-color folders, newspaper inserts, up-to-date supplements, TV magazines, display wrappers etc.

In many cases the potential user is now using flatbed letterpress and will make the transition all the way to web-offset in one jump, instead of going to sheet-fed rotary and/or sheet-fed offset en route.

The plant that is now operating medium size sheet-fed offset and is planning to step up to 43 x 60″ or 54 x 77″ should consider web before making a move. Or, if a plant is operating medium range sheet-fed presses and is faced with replacing several presses or adding in the same range, web's economy may be a likelier choice.★

Attaching the lead end of removable face to protruding screws or special hooks inserted in lead end mounting device. Next, plate cylinder pressure is applied to the Polyribron blanket and it is smoothed on to the backing.

new product report...

Dewey & Almy Polyfibron

Two-Piece Blanket

AN altogether new concept in offset blankets—a two-piece banket, comprising a backing and a removable face — was introduced to the trade press last month at a special press reception in Chicago during the NAPL convention.

Top officials of the Dewey and Almy Chemical Division, W. R. Grace & Co., Cambridge, Mass., were on hand to make a formal announcement of the new product—the "Polyfibron" offset press blanket. They declared that the new blanket markedly improves fidelity of reproduction because of its "polymer-fiber" composition, which is said to be "truly compressible," and its two-piece construction, to eliminate tension and permit replacement at low cost.

Actually the blanket is not altogether new. It has been marketed in New England for six months, and is now available in New York, Philadelphia, Baltimore and Washington and will soon be available in Chicago, according to a statement by James T. Keefe, Jr., sales manager of Dewey and Almy's general printing products department. He added that it may be three to four months before the blanket will be generally available in all parts of the country and abroad.

Dewey and Almy has appointed three national dealers for the blanket: Ideal Roller & Manufacturing Co., Chicago; Interchemical Corp., Printing Ink Division, New York City; and Roberts & Porter, Inc., Chicago.

Six Advantages

The Polyfibron blanket is said to have six major advantages:

1. It transfers a true image—both line and halftone — from plate to paper because it does not distort under pressure.

(In this connection, a company chemist pointed out that rubber is not a compressible material. "If pressed down at one point, as for example, a rubber eraser is pressed between the fingers, the rubber flows and bulges sideways in proportion to the pressure. The Polyfibron removable face is compressible. When pressure is applied, the area under the pressure compresses without sideways displacement, as the coils of an innerspring mattress compress individually in various degrees under the weight of the sleeper").

2. Fidelity is also assured because the compressible cushion provides uniform ink transfer over a wide range of pressures, compensating for

(*Continued on Page* 136)

Left: New two-piece blanket is composed of blanket backer mounted like conventional blanket, and a compressible "polymer-fiber" removable face applied to it. **Right:** Miking the Polyfibron blanket. Packing similar to that used with conventional blanket, or slightly more, is used.

NAPL Officers: (l.-r.) Secretary Carnegie, vice president Hudders, president Morgan, executive vice president Soderstrom and treasurer Glover.

NAPL Draws Record 5,577 To Convention and Exhibition

THE biggest, most enthusiastic convention in the history of the National Association of Photo-Lithographers—with 5,577 persons registered, and 116 firms exhibiting equipment and supplies — highlighted a busy month of graphic arts conventions in October.

The NAPL, holding its 28th annual convention and exhibit, met at the Conrad Hilton Hotel, Chicago, Oct. 5-8.

These were some of the highlights of the four-day meeting:

- The registration clerks ran out of formal registration blanks and had to use note pads when attendance at the meetings and exhibits swelled far beyond expectations. The number surpasses, by several thousand, the previous record for this association.
- J. Tom Morgan, Jr., of Litho-Krome Co., Columbus, Ga., was elected president of NAPL, succeeding Stanley R. Rinehart, of DuPont Printing Plant, who had served for two years. Mr. Rinehart was honored with an engrossed resolution of praise. It was presented by Penn R. Watson, former long-time treasurer of the association.
- Membership in NAPL broke another record—with the total reaching 1,275 companies as of Sept. 30.
- The board of directors approved an expanded budget, under which the headquarters staff will be increased "to render yet greater services to the membership."
- Next year NAPL will return to New York, meeting at the Hotel Commodore, Sept. 27-30. The following year the group will hold its first convention on the West Coast, meeting in Los Angeles.

Assisting president Morgan during the coming year will be the new vice president, Milton Hudders, Recording & Statistical Corp., William H. Glover, Jr., Sweeney Lithograph Co., continues as treasurer, and George G. Carnegie, Consolidated Lithographing Corp., continues as secretary. The NAPL staff, headed by Walter E. Soderstrom, executive vice president, is unchanged.

After retiring president Rinehart had welcomed members to the convention Wednesday afternoon, Frank R. Turner, Jr., NAPL cost accountant, opened the program by moderating a clinic devoted to a consideration of the "Financial End of Lithography." Panelists included Thomas R. Johnson, W. A. Krueger Co.; Mr. Hudders; and K. L. Warren, Package Products Co., Inc.

Mr. Turner used a "spread-sheet" to go over the basic points of costing in the litho plant. He covered in detail the basic cost centers.

He remarked that "after we have set up budgeted hourly cost rates for many NAPL members and presented them to top management, we are often told that our computed rates were actually closer to the lithographers' selling rates and in some cases more than their present selling rates."

He explained that this is sometimes due to a lithographer absorbing too many increases in costs over the years without passing them on to his customers.

NAPL leaders: (l.-r.) Charles E. Mallet, Rex G. Howard, Walter E. Soderstrom, William H. Glover, Jr., Merle S. Schaff and Bernard Sears.

He suggested these five basic points for management to follow in improving the financial picture:

1. Analyze your percentage of productivity, and your equipment.

2. Examine your administrative and selling overhead percentage in relation to manufacturing expense. This will point out places where expenses can be trimmed.

3. Periodically examine your spoilage records and remedy the causes involved.

4. Scrutinize your shop overtime carefully. "Did your employes work overtime last night, but have insufficient work this morning to keep them busy at straight time rates? Are you passing on to your rush-hour customers overtime costs wherever possible?"

Mr. Johnson concentrated on budgetary planning and control. He described the nature of budgeting, its advantages and limitations, then went on to tell how such a program might best be installed.

"A budget program," he said, "will be fully effective only if it encompasses the entire organization; a complete installation should be the ultimate goal. This may be accomplished in gradual steps by introducing the program to limited areas of the organization during the break-in period.

"Establishment of the proper climate is also essential to the success of the program. A well designed educational effort is the best means of indoctrinating supervisors with the philosophy of budgeting as a principal tool of successful management. To avoid the possibility of misunderstanding, participating personnel should be provided with written instructions which spell out the procedures and time schedules to be followed."

Some of the advantages of budgeting are that it provides a reliable means of projecting operating results for the budget period, it acts as a guide in establishing financial control policies, it establishes a realistic basis against which to measure actual results and it promotes an atmosphere of profit-consciousness.

At Reception: (l.-r.) John Kuentz, Sol D'Alessandro, Penn R. Watson, Robert Cutrona, F. R. Turner, Jr., and R. S. Emslie, Jr.

However, he went on, budgeting is not without its limitations. Among these he mentioned that "it is not a substitue for sound operaing procedures or good business judgment; it cannot replace good human relations, and it can sometimes cause a tendency to over-plan or over-control."

Depreciation Techniques

The next panel member, Mr. Hudders, spoke on the importance of setting up depreciation and salvage values. He cited the case of a company that found it necessary to replace a piece of equipment that had originally cost $12,000. They realized $1,000 in salvage, but when they investigated new equipment, they learned that they would have to pay $35,000 for a similar piece of equipment. But to meet modern demands, they would actually need to put out $67,000 for an improved model, a difference of $54,000 from the $13,000 they had on hand for the purchase.

"Since Uncle Sam takes 52 percent for taxes, it was necessary to make a profit before taxes of $112,500 to net the required $54,000. In turn, they had to sell one and a quarter million dollars worth of products in order to raise sufficient profit for the deal."

He declared that depreciation is 2.74 percent of the lithographer's sales dollar, just about identical with average profits in the industry, but that they might consider two other methods which may give more favorable results: the sum - of - the - digits method and the double-declining-balance method.

"It must be remembered," he cautioned, "that accelerated depreciation does not give you any more depreciation, it merely transfers a greater amount of depreciation into the early years. This undoubtedly would help where obsolescence is a factor and you recover the loss in value early in the life of the asset."

In these inflationary times, he concluded, "it certainly means that we have to set aside more than our depreciation if we hope to remain in business when the old press is worn out."

The concluding speaker, Mr. Warren, outlined some methods to consider in improving profits through management controls. He grouped them into three general categories:

1. Increase sales price and maintain volume.

2. Increase volume and maintain sales price.

3. Decrease costs.

The Thursday morning program was devoted entirely to a panel discussing of quality control. The auditorium was packed for this presentation, one of the best received at the convention.

Quality Control

After an introduction by George Carnegie, Robert E. Wood, of Western Printing and Lithographing Co., told of the reports and forms used by his company to control quality. Major problem in the program is to "feed back" quality control information to the production men fast enough to be of some use to them.

Another vital factor is developing a "quality attitude" on the part of suppliers and workers. He summarized the four parts of the Western program:

1. Develop quality conditions.

2. Devise quality methods.

3. Instruct workers in the application of control principles.

4. Follow up and "feed back" the information promptly.

Louis D. Pollner, of Consolidated Lithographing Corp., concentrated on materials and equipment necessary for a QC program. He said that many lithographers have the idea that the requisite equipment is very costly and extremely complex. Actually, an adequate program can be set up using quite inexpensive instruments that are relatively easy to operate.

In his opinion paper is the single most important material to be controlled. He told of paper and ink testing programs his firm has instigated, and the excellent cooperation they have obtained from their suppliers, resulting in more standardized products.

He mentioned such instruments as densitometers, dark field illuminators, sensitivity guides, illuminating magnifiers, and register rules.

Russell K. Johnson, of the DuPont Printing Plant, showed slides of the QC measures in his plant. He showed a variety of forms and charts for plotting deviations from the desired product, and told how this information is sent back to the pressmen so that they can make necessary adjustments.

In their zeal to produce a really quality product, some production workers actually try to control the job to a finer degree than is feasible or even necessary. In answer to a question about the cost and value of a QC program, he asserted that a recent check in his plant revealed that the program more than paid for itself, by eliminating the need for costly inspection. "You can't inspect quality into a job, anyway," he added, "it must be built into the product from the very start."

Furthermore, he said that the good will and customer satisfaction built up by a quality program is an invaluable asset to any litho firm.

B & W Ignored

J. Tom Morgan, the new president, was the final speaker on the panel. He said that in their rush to get into four-color process work, many lithographers have virtually ignored black and white jobs, with the result that there is still too much low quality work in this field.

"'Some lithographers, stuck with what they consider to be an inherent inability of the process to get a good solid black, are tempted to abandon

Next Year

In 1961, the National Association of Photo-Lithographers will return to New York for the 29th annual convention and exhibit. The meeting will be held in the Hotel Commodore, Sept. 27-30.

the pursuit of quality in this work." He told how his company uses a double black print, stressing highlight quality in one print and shadow areas in the other, to get a result that approaches the quality of a photographic print.

In fact, he confided, five graphic arts experts were completely fooled by a comparison test of such a litho job and the photographic copy. Viewing the pieces from a short distance away, without the aid of a magnifier, all five picked the offset specimen as the "photographic print."

The copy was shot twice, with a screen angle difference of 30° and run on a two-color press (both units printing black), he explained.

The question and answer period which followed, elicited many questions. There were inquiries about air conditioning (it is very important, particularly in the press room, Mr. Pollner observed), screen angles, and color charts, but time and again the questioners got back to the question of cost. Both Mr. Johnson, in his report of a specific example of savings in his plant, and Mr. Pollner, with his statement that quality control instruments needn't be elaborate, tried to reassure the audience that the program needn't be expensive.

"Just putting the fires out more than pays the cost of a quality control system," Mr. Wood added. Mr. Johnson guessed that the QC program at the DuPont plant cost in the neighborhood of one percent of the sales dollar.

Dr. Paul J. Hartsuch, LTF, opened the Friday morning program with a talk entitled "LTF Takes a New Look at Zinc." He told of the cooperative research program which has been conducted at the Lithographic Technical Foundation, which, far from writing off zinc as a big factor in lithographic plates, has yielded results that make its use very important in the industry.

Better surfacing for zinc plates, together with a process that reduces the stretch factor in the metal, have combined to make it a very attractive medium for the litho plate, he explained, particularly in the wipe-on field.

During the convention an educational exhibit told the story of the new zinc plates and their advantages to lithographers.

John L. Kronenberg, of S. D. Warren Co., chairman of the public relations committee of LTF, told the lithographers where their dollars go in LTF research. He described the LTF laboratory and equipment, calling it a "complete pilot plant for lithography," told of the technical and consulting services carried on at Glessner House, in Chicago, and listed the educational materials—books, study aids, audio-visuals, etc.—which the Foundation produces to bring the results of research into the litho shop.

'Great Bargain'

He described an investment in the LTF as "one of the great bargains of all time," declaring that it would yield a return of 250 percent; in the form of usable research findings.

Some of the forms that can be useful in controlling production in the small plant were described by Rex G. Howard, president of the Howard Co., Peoria, Ill. He presented samples of various sheets and told how they are filled out in the various departments in order that a constant check on production progress is maintained.

He said that careful attention to production control can result in better quality products and, in the long run, appreciable savings.

Under the provocative title "Hanging Together or Hanging Separately," Robert G. Kelley, president of Columbus Bank Note Co., commented on the great number of small, family-owned firms in the graphic arts industry. He mentioned the many mergers that have taken place in recent years, and outlined some of the various types of financial arrangements under which plants may merge, consolidate, form holding companies, etc.

He discussed the pros and cons of exchanging shares of stock in a holding company, franchising arrangements and use of the Small Business Act of 1958, which provides for tax concessions under certain circumstances.

Likening the pattern of business growth to that of human growth—from infancy through adolescence and middle age to maturity—C. J. Minnich, Jr., of Stevenson, Jordan & Harrison, Inc., noted three considerations for management:

1. Necessity for a good sales program. (At first the owner is his own sales force; later turning over this job to a sales staff.)

2. Need for developing a well-organized administrative department, as the company goes into "adolescence."

3. Need for relinquishing authority, when the company is mature.

"Growth in management techniques," he summarized, "means your continued study and improvement in how, where and what to sell."

(*Continued on Page* 135)

NAPL 1960: Formal photo of officers and staff members.

LITHO PLATES

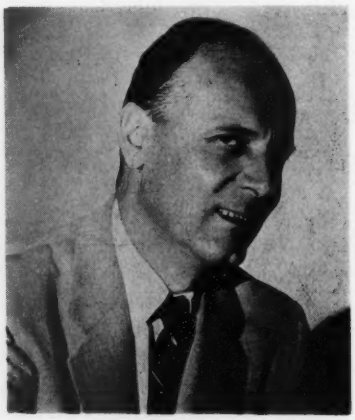
Lithographers now have a wide choice—from paper to copper—of presensitized, conventional and wipe-on plates for all types of jobs

By *Albert R. Materazzi*
Research Coordinator,
Litho Chemical & Supply Co.

AMONG the newest plates which have entered the platemaking field in the last three or four years, are the so-called "wipe-on" plates. These are aluminum plates, to which some sort of a grain structure has been imparted. This grain can be produced by dry steel brushes, by wet brushing with pumice powder, or by sandblasting. After the plates have been grained, they must be specially treated to passivate the aluminum, so that it will not oxidize, and so that it will run cleanly on the press. The chemical treatment is also necessary when diazo coatings are used on these plates, and it can be considered as a substratum for the diazo coating.

In use, the plates are wiped with a diazo coating, using a lint-free paper applicator. The coating dries rather rapidly and is ready for exposure. All of these plates are negative-working, although some work is being done with positive-working wipe-ons. The original technique in finishing these plates was to coat them with a greasy developing ink after exposure, and then develop them with an acidified gum solution. The trend today is to use a one-step developer and sensitizer.

These types of solutions are called lacquer emulsions, and actually are two solutions in one. The water phase contains an acid, gum Arabic and a wetting agent. The lacquer phase contains a lacquer resin and a solvent for this resin. They are homogenized, so that they do not separate, and when applied to an exposed plate, the water phase removes the coating from non-printing areas and desensitizes the aluminum in these areas, and the lacquer phase deposits the lacquer resin on the exposed diazo image.



Albert R. Materazzi

Advantages of Wipe-Ons

The wipe-on plates have found a great place in the market. They are rather simple to make, and they give somewhat longer runs and more flexibility on the press than conventional presensitized plates. It does not seem to be necessary that these plates be evenly coated. I have personally taken a dried, coated plate and marked an X where I was going to drop a flat tint. After the plate has been processed, it was not possible to find the X which I had marked on it. Therefore, streaks which develop in the coating do not seem to be a factor in the way the plate prints.

Wipe-ons plates are available from many sources. The principal ones are the S. T. plate manufactured by the Sumner Williams Co., and marketed through Harold M. Pitman, the WIPO plates, manufactured by John Stark Laboratories and marketed through Litho Chemical and Supply and its dealers, the Duralith and KG plates, manufactured by the Capitol Regraining Co. and marketed through the Duralith Co., the Velvet Grain plate, manufactured by Western Litho Graining Co., the Premcote plate, manufactured by Chicago Lithoplate Company, and the Agate plate furnished by American Graded Sand Company. Wipe-on plates are available in various sizes and thicknesses.

All wipe-on and presensitized plates on the market today, using diazo coatings, are used on aluminum. For the past two years, the Lithographic Technical Foundation has had a research project sponsored by the Zinc Institute, aimed at improving the position of zinc in the lithographic plate market. They have recently described, and are field testing, a wipe-on process utilizing a diazo coating, on grained zinc. They are not yet ready to announce the process, and at the moment are still field testing and working bugs out of it.

With all of the advances in the presensitized and wipe-on fields, we sometimes lose sight of conventional surface plates. Great improvements have taken place in surface platemaking methods in the postwar era. Much of this work has been done by

From an address presented at the 41st annual Craftsmen convention, Atlanta.

LTF, and much has been done by manufacturers. It is possible to produce excellent surface plates, utilizing the most modern materials which are probably stronger on the press and give much more flexibility than either the presensitized or the wipe-on plates.

Zinc Has Its Place

Many large plants which have a high quantity plate requirement, find that it is more economical to use zinc surface plates than any other plates on the market. The reason for this is that zinc plates can be regrained many times and the chemicals utilized are reasonably priced. The only place where wipe-on and presensitized plates have an advantage over zinc surface plates in the factor of convenience.

Certainly, it is easier to take a plate out of a package and put it in the vacuum frame than it is to take it, counter-etch it, pre-etch it, and coat it in a whirler. From the vacuum frame to the finished plate, time elapsed and material costs are about the same for the presensitized plates as they are for surface plates.

The improvements in surface platemaking have come all along the line. The coatings have been improved by the use of casein and casein derivatives. Lacquers used in surface platemaking are much better now than they have ever been, and finally, the desensitizing techniques, such as the Post Nitol, Post Brunak, Post Chronak and the gum phosphoric tannic etches, have all contributed to the possibility of producing plates that are very consistent in their performance.

A new advancement in surface platemaking has been recently introduced by Printing Developments, Inc. Much of the ground and field testing has been done at the Government Printing Office. In this process, aluminum is used, and it is not grained. It is degreased and a chemically etched grain is produced on it. The plate is dried and coated with a bichromated casein coating by hand, just by wiping the coating on. It is then exposed, lacquered, inked and treated like a conventional surface plate. After the plate has been run on the press, the process is repeated and can be repeated as long as the aluminum holds together. Of course, eventually, the metal will break, where the edges are held by the grippers, and the plate must be cut down to the next lower size press or scrapped.

Finally, there is a very interesting plate in the wipe-on field. It is a black iron base, the same type of iron or steel which is used in making tin cans. The plate is coated with a ceramic enamel. This is fired and chemically etched. The plate is coated with a diazo coating, and processed in exactly the same manner as the wipe-on aluminum plates. The plate is trademarked "Ceramograph" and is manufactured and marketed by American Graded Sand.

In the longer-running plate field, the first plates we should discuss are deep-etch. These plates can be made on zinc, aluminum or stainless steel. Size, of course, is not a factor, since the only limitation imposed on size is the limitation of the equipment available to process them. Improvements in the field of deep-etch platemaking have not been as dramatic as those in the diazo or presensitized field. However, substantial improvements have been made in deep-etch platemaking in the postwar era.

Coatings Improved

Coatings have been improved to a large extent. Coatings which are on the market today are clean, have a long shelf life, and the so-called dark reaction has been reduced. As a matter of fact, there are some coatings on the market today which can lie over on the plate for as long as two or three days without affecting the development characteristics of the plate.

Much of the improvement in deep-etch platemaking has been the development of the copperized aluminum plate. In this process, a conventional deep-etch plate is made. For those of you who are not familiar with the process, I would like to describe it briefly. A grained aluminum plate is cleaned by counter-etching, and then is coated with a bichromated-gum Arabic coating in a whirler. It is exposed to a positive, and after exposure, the unexposed portions of the coating are developed away from the plate, exposing the aluminum in what will be the printing areas of the plate. The plate is now deep-etched with a solution which removes a small quantity of the aluminum from the surface of the plate.

Most of the deep-etch solution used in the past on aluminum included perchloride of iron. However, in recent years, the Lithographic Technical Foundation has discovered that deposits of iron in the image portion can cause trouble on the press. So they have developed a solution which they call Nicohol which will remove this iron from the image portion of the plate. However, use of Nicohol is greatly resisted by most platemakers, because it is made of nitric acid in cellulose solvent, and because it requires considerable time to completely remove the iron on the plate.

There are now etch solutions on the market which do not include perchloride of iron, and thus eliminate this problem.

After the plate has been deep-etched, it is washed with alcohol, and then copper is plated chemically onto the image portion of the plate by use of an alcoholic solution of a copper salt. The plate is again washed with alcohol, then lacquered, inked and the stencil removed. Copperized aluminum plates have found a good place in the lithographic plate market, because they permit long runs, are rather simple to make, and are economical. They give good tone reproduction and maintain the tone reproduction throughout the length of the run.

One of the newest advancements in deep-etch platemaking field was recently announced by Edward Stern Company, Philadelphia. In the Stern process, instead of plating copper onto the image portions of the plate, chemically, it is done electrolytically. That is, the plate is wired to one end of a battery, and the deep-etch swab that is used in the process is wired to another. Current is caused to flow between them, and the copper which is produced in the image portions of the plate is now bonded elec-

Litho Schools

Canada—Ryerson Institute of Technology. School of Graphic Arts, 50 Gould St., Toronto, Ont., Canada.

Chicago—Chicago Lithographic Institute, 1611 W. Adams St., Chicago 12, Ill.

Cincinnati—Ohio Mechanics Institute, Cincinnati, Ohio.

Cleveland—Cleveland Lithographic Institute, Inc., 1120 Chester Ave., Cleveland 14, Ohio.

Houston — Univ. of Houston, Cullen Blvd., Houston 4.

Los Angeles—Los Angeles Trade Technical Junior College, 1646 S. Olive St., Los Angeles 15, Calif.

Minneapolis—Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

Minneapolis Vocational High School, 1101 Third Ave. South, Minneapolis 4, Minn.

Nashville—Southern Institute of Graphic Arts, 1514 South St., Nashville, Tenn.

New York—New York Trade School. Lithographic Department, 312 East 67th St., New York, N. Y.

Manhattan School of Printing, 72 Warren St., New York, N. Y.

Oklahoma—Oklahoma State Tech., Graphic Arts Dept., Okmulgee, Okla.

Rochester—Rochester Institute of Technology Dept. of Publishing & Printing, 65 Plymouth Ave., South Rochester 8, N. Y.

Pasadena—City College, 1570 E. Colorado St., Pasadena, Cal.

Philadelphia — Murrell Dobbins Vocational School, 22nd and Lehigh, Philadelphia, Pa.

Pittsburgh—Carnegie Institute of Technology School of Printing Management, Pittsburgh.

San Francisco—City College of San Francisco. Ocean and Phelan Aves., Graphic Arts Department.

St. Louis—David Ranken, Jr., School of Mechanical Trades, 4431 Finney St., St. Louis 8, Mo.

Vancouver—Clark College.

West Virginia—W. Va. Institute of Technology. Montgomery, W. Va.

Trade Directory

Internatl. Assn. Ptg House Craftsmen
P. E. Oldt, Exec. Sec'y.
Room 307; 411 Oak St., Cincinnati 2.

Lithographers and Printers National Association
Oscar Whitenouse, exec. dir.
1025 Connecticut Ave., N.W., Wash., D. C.

Lithographic Tech. Foundation
William H. Webber, Exec. Dir.
131 East 39th St., New York 16, N. Y.

National Assn. of Litho Clubs
Edward M. Harwood, Executive Sec.
430 S. Clark St., Chicago 5, Ill.

National Assoc. of Photo-Lithographers
Walter E. Soderstrom, Exec. V.P.
317 West 45th St., New York 36, N. Y.

National Metal Decorators Assoc., Inc.
James G. Smith, Secretary
P.O. Box 506, Crawfordsville, Ind.

Printing Industry of America
Bernard J. Taymans, Mgr.
5728 Connecticut Ave., N.W., Washington, D.C.

trolytically instead of chemically. The resultant plate is much stronger and more resistant to press wear than is chemically-plated copper.

Hard Metal Plates

Finally, we will take up the so-called hard metal plates. There are two types of bimetallic or polymetallic plates. The first of these is copper plated on either steel or aluminum. The most familiar plates of this type are the Levey Bimetal plate, which was formerly known as the Aller plate, and the Lithengrave plate, which is manufactured by Printing Developments, Inc. These plates are negative-working. That is, they are exposed to negatives.

In use, the plate is cleaned and coated with a bichromated gum Arabic coating. It is exposed to the negative and developed in the same way as the deep-etch plate is developed, only this time the stencil is removed in what will be the non-printing areas of the plate, and the exposed hard gum remains in what will be the printing areas of the plate. The plate is now treated with an acid solution (usually perchloride of iron) which removes the copper in the non-printing areas, exposing either the steel or the aluminum, depending upon the base metal used. The stencil is now removed from the copper in the printing areas, and the plate is rubbed up with a greasy ink and gummed, and is ready for the press.

In the positive-working polymetallic field, the top layer of metal on the plate is generally chromium. Such plates are the Levey Trimetal plate, which consists of steel, on which copper and then chromium have been plated. The PDI plate called the Lithure plate, is an aluminum base plate upon which copper and chromium have been plated. PDI is also testing a steel base Lithure plate. In use, these plates, again, are cleaned and coated with a deep-etch type of bichromated gum Arabic coating. They are exposed to a positive and developed in the same manner as a deep-etch plate.

After development is complete, the plate is treated with a solution which removes the cromium from the printing areas of the plate. This exposes the copper, which forms the printing image. The stencil is removed, and the plate is again rubbed up with a greasy ink and is ready for the press. Chromium remains in the non-printing areas.

The bimetal and trimetal plates are extremely durable, and permit extremely long runs. They give good tone reproduction, but they fall down to a certain extent when ordinary negatives or positives are used. To obtain the best results from these plates, it is necessary that the negatives or the positives be adjusted so that the best type of tone reproduction will result.

How To Choose

Now, how do you go about selecting the plate for your job? I am reminded of the story of the executive who wanted to hire a secretary, and his personnel department manager was not sure which one would best suit the executive, since they were all equally capable. So they called in a psychologist to perform certain psychological tests. The psychologist asked each of the three girls, "What are two and two?" The first one answered, "Four". The second one answered, "Well, it could be 22," and the third one answered, "Well, it could be either four or 22." The psychologist then turned to the executive and said, "Now, you see, this is a very important question. You note that the first one immediately said 'four'. She permitted no other possibility. The second one was more doubtful, while the third one wanted it both ways. These girls would no doubt have quite different attitudes toward their work. Now which one would you take?" The executive thought for a moment and answered, "I'll take that cute blond on the end; she's really stacked!"

Those of you who are in the position of deciding which type of plate to use should take a more scientific approach than the executive did. On analysis and in use, they may fall short of your expectations. However, if sound purchasing techniques are used, such as are described in any management textbook, this can be avoided. It is wise to set up standards and specifications based on use

(*Continued on Page* 139)

PIA Convention, Show Draw 1,300

MORE than 1,300 printers and lithographers, attracted by a full-week's program, an equipment exhibit and clinics on production and technical problems, jammed the Sheraton-Park Hotel in Washington, D. C. late last month for the 74th annual convention of Printing Industry of America.

These were the highlights of the PIA convention, Oct. 24-29, which climaxed a busy month of graphic conventions:

- Frank N. Ehrenberg, of Blanchard Press, New York, was elected president to succeed Walter F. McArdle, McArdle Printing Co., Washington, D. C.
- PIA officials reported that they have made plans to continue the equipment show each year in conjunction with the annual meeting of the group.
- Pittsburgh, Pa. will be the site of the 1961 convention, Oct. 9-14. An optimistic Pittsburgh contingent was urging advance registration under the banner "Plan Now To Attend the 1961 World Series." The meeting will be held at the new Pittsburgh Hilton Hotel.
- In addition to the general sessions and the special group meetings, such as Union Employers and Master Printers, the Production Session on Friday and the Technical Forum on Saturday augmented the program.
- The exhibit was credited with helping boost attendance to a new record. Furthermore, a top PIA officer expressed the opinion that most of those attending the convention stayed up to 50 percent longer than usual because of the expanded program and exhibit.

New PIA president Frank Ehrenberg

President McArdle opened the meeting on Monday morning with a welcoming address. Paul Lyle, executive vice president of Western Printing and Lithographing Co., Racine, followed with a general discussion of the graphic arts materials and equipment on view at the exposition.

Peter Becker, Jr., owner of Arrow Service, Washington, D. C., was awarded the A. F. Lewis Memorial Award, in a presentation made by Harold W. Braun, of Fetter Printing Co., Louisville, who is PIA treasurer.

In an address entitled "The Printer's Role in World Affairs," outgoing president McArdle declared that the printing industry "is the world's major means of communication through which we have acquired uniform laws and a stable society."

The value of printing is pointed up, he added, by the fact that dictators all seek to restrict the press and the free dissemination of information. He concluded that the printing industry has a responsibility to live up to the freedom and rights it helped America secure.

Note Burning Ceremony

Another event of significance and satisfaction to PIA members was a note-burning ceremony conducted by Elmer G. Voigt, Western Printing and Lithographing Co., chairman of the Building Properties Committee, and John M. Wolff, of the St. Louis branch of Western, vice chairman of the committee.

Monday afternoon was devoted to the opening of the exhibit. In the evening the Printing Industry of Washington was host at a "Welcome to Washington" cocktail party. A special dinner for the trade press followed.

The second general session, on Tuesday morning, consisted of a panel discussion on the topic "Is More Volume the Only Answer to Printing Profits?" Mr. Ehrenberg introduced John G. Gerken, management consultant, of Los Angeles, who set the tone for the case history reports that followed.

Mr. Gerken outlined a long list of "pitfalls" to printing management, including the following:

1. Lack of salesmanship. He contrasted the printing plants that are selling their products at a 15 percent profit, with other firms that "can't give their product away." The difference,

New president Ehrenberg (left) who moderated panel that included (l.-r) McWhirter, Sayers, Nixon and Gerken, at PIA convention in Washington.

he explained, is in the nature of the sales approach.

2. Poor Estimating. Complete details of the job, not sketchy notes, must be given to the estimator. Composition charges and offset preparation are two of the most difficult things to estimate accurately.

3. Specifications incomplete. "Don't estimate unless the customer will let you take the dummy back to your plant," he urged.

4. Selling on hearsay of competitor's prices. "Why get caught in the badger game that many printing buyers try to play? Don't let the buyer play your price against your competitor. Don't let the buyer set the price."

5. Cutting prices to gain new customers or to get work for new equipment. Pricing should be based on a sound knowledge of your actual plant costs, not budgeted hourly costs, because these may not apply to your particular operation.

Mr. Gerken had harsh criticism for management that pays no attention to financial controls because it "doesn't have time to count its money." He also chided industry leaders who "don't have time to read" trade journals. "The trade magazines are trying to elevate your industry and many of you don't even read them."

In conclusion, he urged the printers to "shave two percent off your labor and materials costs. That way, if you are now making four percent profit, you will be increasing your profits by 50 percent." Such cost reductions are possible if management will only pay close attention to its costs and its productive time, he added.

A. M. McWhirter, the McWhirter Co., Kansas City, Mo., followed with a case history entitled "Is More Volume the Only Answer to Printing Profits?" He stressed that more *profitable* volume is the answer, but volume for its own sake is not.

He decried the practice of offering low prices to potential new customers as "stupid and shortsighted." "We wouldn't offer such a deal to our best customers, so why make the offer to a newcomer?"

What About Volume?

He made these three points about volume:

1. Volume is important to us so long as it is profitable.

2. It is important to us so long as it does not make us live in constant fear of the loss of a single or even several accounts.

3. It is important if we can luckily, or with careful planning, get the right kind of a fill-in at the exact time of need.

"Knowing your own plant operating needs is the key to gaining by volume, otherwise the pursuit of volume in itself can be a wild goose chase."

Don Nixon, of Bodine, Inc., Michigan City, Ind., concerned himself with estimating and financial control.

He cited the following ways that his company—a combination plant employing 36 persons—cut costs by using the PIA Ratio Studies:

- By reducing spoilage.
- By cutting "fixed" expenses for insurance by reprogramming.
- By reducing adminsitration expenses.

Mr. Nixon explained that his company has a standardized approach to estimating for ink. It involves a code number system for a specific set of standard inks. This assures the customer a good match and helps the estimator.

The final speaker, Herbert W. Sayers, Sayers Printing Co., St. Louis, spoke briefly on the importance of building accounts, as opposed to sales. He said that his company has stayed in the group of PIA Top Profit firms by following these precepts:

1. Specializing in brochure and advertising work.

2. Studying the market. (He said his salesmen regularly read leading trade journals in the fields in which their customers operate.

3. Studying Sayers place in the market. "We know what equipment all our competitors have."

4. Studying market potential.

5. Knowing our costs. Our salesmen do all their own estimating. "They work two years inside before they go out on the street selling."

6. Specializing in service.

Robert Parker, Parker & Sons, Inc., Los Angeles, who had been scheduled to speak, was unable to attend the convention.

Wednesday and Thursday were devoted to the UES and MPS section meetings. The Master Printers discussed such things as employe policy manuals, pension plans, employe benefits, handling a union organizing drive, "The Union Threat to Personal Freedom," and right to work laws.

The Union Employers devoted all of their Wednesday session to a

(*Continued on Page* 139)

Graphic Arts Safety Group In Spirited Chicago Meeting

By *H. H. Slawson*
Chicago Correspondent

THE revitalized Printing and Publishing section of the National Safety Council held its annual meeting in Chicago Oct. 18 in a "rarin' to go" spirit which set at rest all fears that it would be the section's last meeting.

This, it will be recalled, had been the fate decreed for the section one year ago by the National Council, which had based its intended action on the printing industry's failure to show interest, appreciation and support of NSE activities. Almost at the last moment Printing Industry of America had stepped forward last year with a pledge to use its power and prestige to build up support of the safety movement among its many divisions.

A one year reprieve was granted by the Council to allow PIA to make good and what has been done since then is quite a story. Cooperating with the P. & P. section's general chairman, D. H. Grothous and its other officers and leaders, PIA president, Willian F. McArdle, and general manager, B. J. Taymans, have been enthusiastically promoting the safety program.

This buildup effort was carried right down to the wire, with a conference on the morning of Oct. 18 between the printing leaders and representatives of national insurance groups, both stock and mutual. It was a planning session, Mr. Taymans stated, to determine how use could be made of the facilities for educating printers on accident prevention available from the insurance companies.

Mr. Grothaus, who is safety director, McCall Corp., Dayton O., was reelected general chairman of the section for his second term. New vice chairman of the section is Stanley L. Juroff, safety coordinator, *New York Times*. He was selected in recognition of the growing interest newspaper publishers generally are taking in the printing safety movement. Homer Clevinger, safety director, Kingsport Press, Tenn., was reelected to a second term as secretary. Committee chairmen were to be announced later by Mr. Grothaus.

Following the election, Paul L. McNeill, Rand McNally & Co., and immediate past general chairman of the section, presented Mr. Grothaus with a plaque expressing the National Safety Council's appreciation of his "outstanding service and devotion to safety."

The afternoon's program had been designed by a committee of which Mr. Taymans of PIA was chairman and Charles Shapiro, educational director, Lithographic Technical Foundation, was co-chairman. It provided a down-to-earth discussion of printers' safety problems from the practical standpoint of the men who have to deal with them daily. Subjects ranged from the advisability of hiring diabetics to that old perennial, the treatment of dermatitis; from administration of a printing plant nursing service to reduction of pressroom noises, and many others.

Dr. John F. Pohlman, associate medical director, R. R. Donnelley & Sons Co, Chicago, emphasized the importance of the pre-employment physical examination as a means for reducing accidents. Its purpose, he said, is to determine where the job applicant can, both mentally and physically, best fit into the plant environment.

Donnelley's he said, gives special attention to the physical condition of new apprentices. He also told of the company's policies on finding a place for diabetic persons, cardiac cases, one-eyed people and those with other physical handicaps. No epileptics are hired, he said, because there is too much chance that they could be hurt around machinery.

Take Nothing for Granted

Don't take anything for granted, Dr. Pohlman advised. Even the best medical department can sometimes slip up, because men anxious to get a job won't tell all when asked to detail their past medical history. They also make an effort to conceal defects, like the man who, several weeks after being put to work, was discovered to have three fingers missing on one hand. He was promptly transferred to another job. In his first assignment this defect would have been a definite hazard.

G. Stuart Mansfield, safety director for 30 years at Western Printing & Lithographing Co's Poughkeepsie, N.Y., plant examined a recently enacted New York statute requiring action to reduce noise in industrial plants. Labor, he said, is objecting to the 80-decibel level set in the law as the maximum permissible noise intensity and wants that level reduced to 75.

Following New York's lead, other states will probably enact similar legislation before long, Mr. Mansfield said. It would be wise therefore, he

advised, for printers to watch the decibel level set in any such future legislation.

A noise survey in Western P. & L's plant, Mr. Mansfield related, revealed that at the delivery end of a folder the decibel level was 110. Twenty feet from the end this dropped to 97 and 50 feet away it was 85. In the offset area the decibel level was 82, three feet from the unit. On cutters and binders the average noise level was from 79 to 85.

He suggested careful tests of an employe's hearing when starting and also when leaving a job. He also pointed out the need for an amendment to the New York law which would prevent filing of claims for loss of hearing until the man has been off the job at least six months. These claims for loss of hearing are increasing, he noted, and since present insurance premium charges do not include provision for setting up reserves to cover hearing losses, the insurance companies are showing interest in any anti-noise legislation.

There is no known preventive or cure for dermatitis, Dr. Robert F. Reed, senior research consultant with the Lithographic Technical Foundation, declared in discussing this subject. The Foundation, he said, has been seeking means for avoiding use of sensitizing materials in printing operations and has developed numerous safe substitute chemical formulas. Lithographic pressmen show the highest incidence of dermatitis—over 50 percent—and platemakers show a 20 percent incidence, he stated. Use of presensitized plates is doing much to reduce the problem.

Dermatitis Problem

Dr. Reed reviewed Foundation publications, dealing with dermatitis, which have been issued during its 35-year life. Most recent of other studies was one made by Northwestern University medical authorities under the financial sponsorship of Chicago Local No. 4, ALA, and the Chicago Lithographers Association. This was published in 1959 and the information it presents will be found helpful, Dr. Reed said.

Mrs. Joyce Benoit, supervising nurse in the *New York Times* medical department discussed some of the problems she deals with. Cooperating with the safety department, she said, the medical department seeks to determine the cause of an accident. It has been learned, she said, that instead of asking the victim to write down, in 1-2-3 order, just what happened, you can find out more about the accident and without distortion or misunderstanding, by just sympathetically putting the fellow at ease and letting him relate verbally just what happened to him.

Despite strict ban on use of carbon tetrachloride, some of this substance showed up around the *Times* plant at one time, she said. This led to closer liaison between purchasing and safety, whereby safety nows checks on purchases and vetoes any chemicals or other materials of a hazardous nature and suggest safe substitutes.

Mr. Juroff reported that the *Times* has been promoting safety since 1929, but it was not until 1959 that the program was put on a formal basis. This came about, he said, when it was noted that the number of disabling accidents was increasing. The safety policy is now formulated by a plant safety committee with help from a state industrial agency which spots weaknesses and recommends changes.

One of the things lacking in the area of employe education in safety, Mr. Juroff declared, is a safety manual dealing specifically with accident prevention in newspaper printing operations. However, he said, the P. & P. section's executive committee is considering revision of its manual covering safety in commercial printing plants, to include a section covering safety in newspaper operations.

Continuing, Mr. Juroff said that in less than one year the *Times* has completed the training of more than 100 foremen to serve as safety supervisors in their respective departments. Safety reports and records have been through IBM machines to pinpoint the causes of accidents and other details, including time of occurrence. One interesting discovery was that accidents are frequent in the first hour of the first day after a man returns from his vacation.

Commenting on the New York statute concerned with industrial noise reduction, Mr. Juroff declared that the cost to reduce pressroom noise to a non-hazardous level is going to be prohibitive. "Perhaps we can now get after the press manufacturers to do something about suppressing noise in their equipment. That has been done on jet planes and it can be done on presses."

Mr. Juroff showed a film covering safe working practices in the *Times* photoengraving department. It is, he claimed, the first such safety film ever produced by any newspaper. It had an immediate effect in arousing interest in accident prevention among the men who had served as "actors."

H. Burt Wallace, saftey supervisor, *Montreal* (Que.) *Star*, told of seeing printers smoking while using benzine. He wondered why "more newspapers don't burn up every day." Greater use should be made of available substitutes for benzine, he urged.

Gordon Rosberg, safety director, Richter, McCall & Co., Chicago, litho firm, urged management to back up its plant safety program by giving the safety director executive status, defining his job, providing a place for him to work and giving him needed tools to do it. Management, Mr. Rosberg declared, can increase its profits appreciably, by an energetic, systematic effort to prevent accidents.

Jack Stroube, safety director, R. R. Donnelley & Sons Co., served as master of ceremonies for the afternoon program. In his introductory remarks he described a new idea, the use of a "ticket" to be served on violators of safety rules. One copy of this "ticket" is filed in the employe's permanent file and can be brought out if needed in the future. This, Mr. Stroube said, is making employes think twice before disregarding safety rules. "It my not be the final answer," he said, "but we're giving it a try."

In closing, Mr. Grothaus said the length of the program might warrant planning for a two-day session in 1961. A stenotype record was made of the proceedings and it was announced that this would be available later to all interested printers.★

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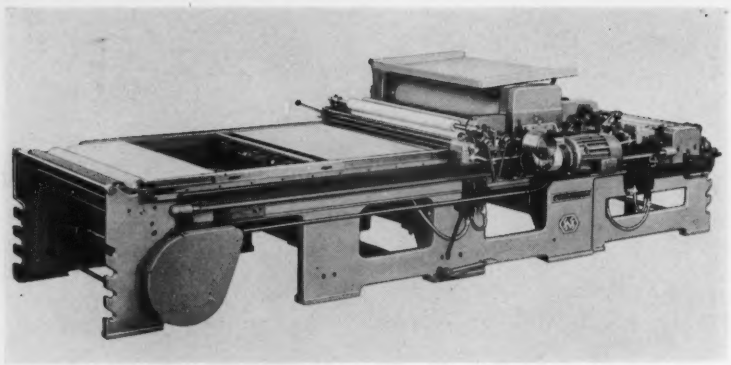

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Offset Proving

By *A. G. E. van der Tuuk*
President, Amsterdam Continental
Types and Graphic Equipment, Inc.

IN letterpress printing pre-make-ready and proving outside the production equipment are long established, efficient practices. In lithography, however, proving remained a problem child for a long time. There were several reasons for this condition.

The development of the production presses went ahead fast, while the proper form of proving equipment remained undecided. This was caused in part by the fact that proving was considered part of plate preparation, and proving remained in the hands of lithographers who were used to rolling up by hand a lithographic stone, and later a zinc plate.

This led to mistrust of the results of offset proofs—not that they were not good enough, but that they were too good! This paradox arose from the craftsmanship of old stone lithographers, who would "tickle" a stone (and later a metal plate) in hand proving until the result looked beautiful—but could not, alas, be duplicated on production machinery.

Many buyers of offset plates and printing were fooled in this manner, approving a proof only to find that the finished job bore no resemblance to it. The resultant skepticism still prevails, and affects attitudes toward offset proof presses.

In this connection, it is important to discuss the mechanical development of offset proof presses up to the modern automatic flatbed offset equipment, and its accurate duplication of production-press results.

The flatbed offset principle, whereby the image was transferred from a flat lying plate via a rubber cylinder to a flat lying sheet of paper, came into being as a continuation of hand lithography. For a long time these machines depended on hand rolling and dampening and in the primitive old-timers the cylinder rolled freely, although guided by a rack, giving pressure by its own weight.

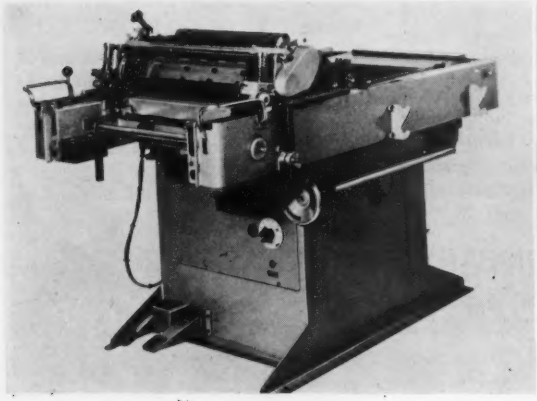
Before the last war, flatbed offsets with automatic inking and dampening were developed in Europe, but the systems were too primitive, with only two form rollers and with the dampening rollers taking water from a pad.

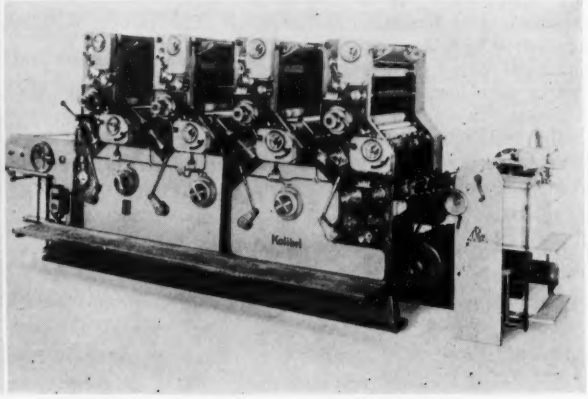
In America, another, more complicated and more costly system was designed whereby the ink and water fountains traveled with the cylinder. Although the results of these machines were pretty good, they never were generally accepted because of their high cost and complicated construction.

In the post-war period, the flatbed offset press finally got full attention and sincere efforts were made in Europe to bring these machines to a point whereby they would be capable

(*Continued on Page* 137)

Left: Fast small flatbed proving press with refrigerated plate bed, suitable for color proving and short runs. **Right:** Small four-color sheet-fed production press which duplicates results of large presses. Many improvements have been made in proof presses in recent years.





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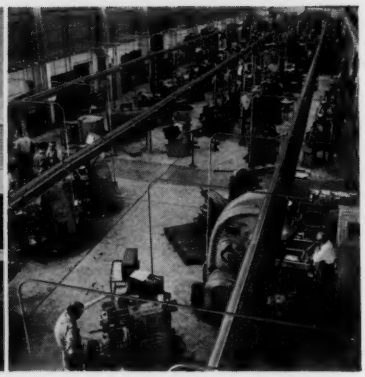


Left: Technicians at Lanston plant assemble a tubular truss, part of huge overhead precision camera. **Center:** Manufacturing and administrative facilities of the company are situated in "Monotype House" a spacious single-level plant, employing 400 persons. Lanston moved to the new location from its old multi-story building in downtown Philadelphia. **Right:** Precision machine work on nearly all component parts, in Lanston's typesetting and photomechanical line, is done in this large machine shop.

Trade Press Tours New Lanston Plant

MEMBERS of the trade press got a chance to tour the new Philadelphia plant of Lanston Industries, Inc., late in September, and to discuss the company's plans with top executives of the firm.

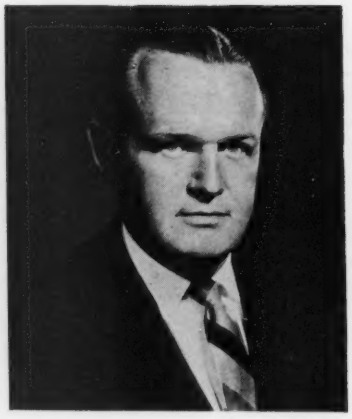
The press reception, on Sept. 28, had two purposes: to show, for the first time, the new one-story Lanston location in North Philadelphia, and to formally introduce Carl C. Sorensen as new president of the 68-year-old typesetting and photomechanical firm. Mr. Sorensen, associated with Lanston for many years, of course is no stranger to the lithographic industry, and his election to the presidency of the company was a welcome and logical move expected by many industry leaders. Also greeting the press at the plant tour and luncheon was Robert M. Campbell, newly elected executive vice president of Lanston.

Other company officials led small groups of editors around the 140,000 sq. ft. plant, pointing out the various manufacturing equipment and processes, machine shops, assembly sections and engineering and design departments. Of special interest in the large manufacturing areas was the attractive appearance given the walls and columns by a carefully planned color scheme, utilizing various restful pastel colors.

There were many interesting things on view in the Lanston plant. Among them were:

- Giant overhead lithographic cameras, in various stages of erection;
- The new Nebitype display typesetting machine, an Italian unit for which Lanston recently gained marketing rights in the U.S.;
- A light integrating unit and a color proving system developed by Unitronics, Inc., an electronics firm purchased last year by Lanston;

Carl C. Sorensen



- The Lanston line of step-and-repeat units, platemaking sinks, frames and whirlers, and darkroom equipment;
- Vastly improved Montotype hot-metal typecasting machines called "Monomatic," with more flexible keyboards allowing much greater variety of type faces.

Although the Lanston plant is not new, it was greatly revamped and redecorated by the company before the move from the old multi-story location on Locust Street was made a few months ago.

"Our new plant, all on one level, permits Lanston to place its various manufacturing operations in a logical sequence, something which was difficult to accomplish in our previous plant," president Sorensen told the editors. Mr. Sorensen had only recently returned from a visit to Italy and England, for conferences with Societa Niebola (which makes the Nebitype machine) and the English division of the Lanston corporation.

A special Lanston lounge car on a Pennsylvania Rail Road train was utilized to transport trade magazine editors from the New York and North Jersey area to the press reception in Philadelphia.★

PRODUCTION CLINIC

Correct Use of Gum Arabic

By *Frank Arbolino*
Assistant Plant Manager
Polygraphic Color Corp.
Bennington, Vt.

ALL too often the correct use of gum arabic escapes the attention of those who should be thoroughly familiar with its properties and potential power. A large percentage of lithographic problems are caused by the improper application of gum arabic. Controversies over whether the grain on a plate should be finer or coarser can be settled frequently by checking the procedure of gumming and the method of applying gum to the plate.

Regardless of the type of grain (or even if there is no grain), a plate will not run properly, and the non-printing area will not stay clean if sufficient gum arabic of the right Baumè reading is not being replaced on the surface of the plate with fountain solution.

While at times it is necessary to use some acid in the fountain solution, it will be found that in many instances better results can be obtained under the same conditions by simply using one ounce of 14° Baumè gum arabic to a gallon of water with no acid. The use of acid alone in the fountain solution at times can be very harmful since it tends to sensitize the non-image area and at the same time sharpen the image.

When too little or no gum is used in the fountain solution, it is dangerous to stop the press to make adjustments. This sometimes is not the case when using presensitized plates, however, for when the gum, which was applied in gumming up, wears off, the plate surface will not carry sufficient moisture to keep it clean, regardless of the grain. Since it is the hydroscopic gum that carries the water, it should be constantly replaced on the plate surface, and this is accomplished through the application of fountain solution.

The grain on the plate does help to hold more solution on the surface than a perfectly smooth plate would, and therefore proper graining is important too. Because gum arabic is only partly soluble in water, the gum that dries in the wells of the grain will remain there longer than if applied to a plate that is smooth.

The important thing in applying gum to the plate is to get it smooth and rubbed down to a point where there are no streaks. This is done best with a soft cloth which is slightly moist or at least not dry enough to absorb too much of the gum. Thus a sufficient amount will remain on the plate to be dried. Obviously if the cloth is too wet it will not spread the gum evenly, and will also lower the pH. If the cloth is too dry, too much of the gum may be rubbed off.

Mr. Arbolino, who has been handling ML's Production Clinic since September, 1958, last month took a new position as assistant plant manager at Polygraphic Color Corp., Bennington, Vt. He also will be helping in an advisory manner, Garrison Color Corp. of Dumont, N. J., an affiliated firm. Mr. Arbolino had served since 1957 with Dexter Press, W. Nyack, N. Y., attaining the post of offset superintendent. His offset experience started in 1932, with Brett Lithograph Co., in New York. He subsequently served with five litho firms in the Philadelphia area, before joining Dexter.

Readers with questions about press and related areas may submit them to Mr. Arbolino. He will answer them as promptly as possible in this column, if they have general interest, but no individual replies can be made.

Questions should be addressed to Frank Arbolino, Production Clinic, Modern Lithography, Box 31, Caldwell, N. J.

How To Store Plates?

Q: *We are storing our press plates after the run in an un-air conditioned room, the plates hanging on racks, grouped in jobs. Now there are two schools of thought as to the use of press sheets for plate protection and identification. Some claim that ordinary stock holds condensed water near the plates and causes oxidation.*

Others claim that press sheets are good protection and at the same time help with faster identification. A prac-

(*Continued on Page* 141)

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PHOTOGRAPHIC CLINIC

A Unique Color Chart

By Herbert P. Paschel
Technical Editor

FROM abroad comes an outstand- promotion piece that not only accomplishes its purpose, but becomes a valuable production tool for the recipient as well. The item is a set of color charts distributed by a German ink firm and its practicality as a color mixture reference will be appreciated by color photographers and dot-etchers.

The set comprises 40 individual cards, 10 cards each for four distinct sets of process inks. Each card is 5½ x 7", has an index tab, and contains 42 or more color squares. A gamut of over 474 color mixtures is shown for each ink group. In each set three cards are devoted to two-color mixtures, six cards to three-color mixtures and one card to color and black combinations. Each color square is perforated, making it possible and easy to compare a color sample with any square on a card merely by placing the card over the specimen. The set comes in an attractive and durable container which can be set-up in easel fashion for convenient use on the work table.

The guide was designed by Rolf Günther, and is published and distributed gratis by Druckfarbenfabrik Gebr. Schmidt GmbH, Gaugrafenstrasse 4-8, Frankfurt am Main—Rödelheim, Germany. The demand has been overwhelming and the first edition is almost exhausted.

The firm advises that requests will be honored as long as the supply of color charts lasts.

It is impossible for Mr. Paschel to give personal replies by mail, but all questions will be answered in this column as soon after receipt as possible. The columnist also is available to the trade as a consultant for more complex litho problems.

Replenishing Developer

Q: *Many developers are kept at normal working strength by the addition of a replenisher solution. I notice that this practice is not suggested for lith-type developers. Why not?*

B. G., BROOKLYN

A: Developers that permit replenishment are usually those that do not undergo radical changes in composition as a result of the developing process. The replenisher merely replaces the components that are used up and thus restores the original balance to a certain extent. But even a correctly replenished solution is never the equal of a fresh, unused solution.

Unlike tone developers, which are intended to reduce silver in proportion to the intensity of exposure, lith developers are designed to intensify development out of proportion to exposure. The primary development action creates certain oxidation byproducts which have a development potential even greater than the initial solution. In the process of converting the exposed emulsion areas to an abnormally high silver density, the lith-type developer changes its composition drastically.

While replenishment might replace certain exhausted components, it can never completely restore the solution to its original condition. Besides, various oxidation byproducts remain in the solution. These would have extremely harmful effects. In short, lith-type developers exhaust themselves, or change so completely, that the desired characteristics are soon lost and are not restorable.

Density Inaccuracies

Q: *I use Kodak's filter control method for compensating for negative differences (contrast) when making halftone positives with a magneta screen. Density readings, filter compensation and exposure times are computed with great accuracy. The exposures are monitored by a light integrator. With all this care, the method still doesn't always work. Can you explain this inconsistency?*

J. S., PHILADELPHIA, PA.

A: Kodak's pamphlet (Q105) describing the filter control method outlines several conditions under which the results are unpredictable. Since these are adequately covered in the adove mentioned instructions, let's explore some other possibilities.

Although you monitor the exposure, this is no guarantee that all light

variations are fully compensated. With fluctuations in line voltage, the light output changes in both intensity and spectral composition. Light integrators compensate only for variations in intensity. Check your line voltage with a voltmeter.If significant fluctuation is noted, you can be sure this is contributing to exposure error.

The next point of consideration is lens flare. You are basing your calculations on the assumption that the image projected by the lens is the same at all focus settings and lens apertures. This is not a valid assumption. If a lens has a high flare factor, the projected image will vary in contrast at different settings. This, obviously, will invalidate the accuracy of your calculations. Check the performance of the lens by means of the flare tests suggested by Yule and others (1).

Other points to consider are: inaccuracies of the lens diaphragm, processing variations and reciprocity failure.

1. Lens Test, Page 122, *Color Separation Photography*. LTF Publication No. 509.
Lens Flare In Process Camera, J. A. C. Yule. TALI Proceedings, 1949.

Tapped Transformer

Q: *The overhead light I use for exposing contact separations operates from a tapped transformer. When I use the different taps I find considerable difference in filter factors. Can you explain why?*

B. C., CAMDEN, N. J.

A: At the different taps the light bulb is being operated at different voltages and this alters the spectral composition of the light as well as the intensity. At the lowest voltage the light predominates in red rays. At the highest voltage the light contains considerably more blue rays. Thus, between the two extremes the filter factors might actually change as much as from a tungsten balance to a daylight balance.

If you must have varying degrees of light intensity, set the transformer to the highest tap and use neutral density filters to adjust the light to the strength you want. This will then keep the filter factors constant for a given panchromatic material and exposure level.

How Much Developer?

Q: *How can I tell how much solution to use to develop a given number of line and halftone films?*

B. G., BROOKLYN

A: The number of films which can be processed with a given quantity of developer depends upon many factors. The composition of the developer, the type of film used, the area of film treated, the amount of density involved and the area of solution exposed to air all influence the exhaustion rate.

You could, for example, develop many more positive images in a given volume of developer merely because postiives generally have less total silver density than equivalent negatives. Another variable is time—age of the stock solution and the length of time the working solution sits in the tray.★

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NALC Hires a Secretary, Proposes Educational Program

AFTER several years of discussion and many hours of committee work, the National Association of Litho Clubs last month hired a professional management service to act as permanent headquarters and permanent executive secretary of the nationwide organization.

At the same time, Rae Goss, NALC president, reported that the executive committee and the standing planning committee have given tentative approval to a unique educational program to be administered by the national group for the use of individual litho club members throughout the country.

News that the group had finally made arrangements for a headquarters and secretary came after a meeting of officers, past presidents and planning committee members in Chicago during the NAPL convention at the Conrad Hilton Hotel.

President Goss told MODERN LITHOGRAPHY that the Robert J. Mayer Co., Chicago, had been contracted with to handle the job, although complete details have not yet been spelled out. Mr. Mayer explained his organization's activities at the Chicago meeting. His office at present handles the organizational details of two other business associations.

It is expected that final details will be worked out so that the NALC will be operating under the new arrangement by Jan. 1, 1961. Mr. Goss declared that "this action means better communications and liaison with the member clubs and a strengthening of our common purpose."

The question of a permanent headquarters and secretary had been vigorously debated at NALC conventions and mid-season Council of Administration meetings for the past three or four years. While there has been general agreement that such a set-up was desirable for improved functioning of NALC, there had been no way to date to finance such an operation.

A dues increase—from $1.50 to $3 a year—approved at the last convention of NALC in Boston, cleared the way for the project, which will begin on a modest scale. It is expected that expenses for direct basic services will run in the neighborhood of $6,000, but that the total cost will depend on the nature and scope of NALC mailings, promotions, travel, etc. Several NALC officers voiced the opinion that the plan could be supported successfully on current and anticipated funds.

The enthusiastic report on the educational program was based on a proposal made at the Chicago meeting by Bud Cartter, president of the Ann Arbor Litho Club, and John Valois of the University of Michigan. The program, tentatively labeled a Lithographic Arts Management Institute, would consider some of the management problems encountered in the lithographic industry and the solutions for them. A five-day seminar at the University of Michigan was proposed for lithographers at the foreman level. This would be supplemented with a choice of related correspondence study courses.

Details of the educational program will be forthcoming in the next few months, according to Mr. Goss.

In a third move, the NALC gave support to regional litho clinics, such as those held each year in, alternately, Dallas and Houston.

Ed Deever of Dallas, who has been among the planners of the Texas clinics, outlined details of the programs at the Chicago meeting. President Goss declared that "it is hoped that programs of this type can be held in other geographic areas. This would go a long way toward developing our membership and serving their educational needs."

Attending the Chicago meeting, in addition to president Goss, were John Murphy, first vice president; James Fraggos, second vice president; Glenn Smith, treasurer; Edward Harwood, executive secretary; past presidents Fred Fowler, Al Tucker, W. O. Morgan, William Stevens and Leonard Starkey; David Gandleman and Leonard Holzinger, assistant secretaries; Sol D'Alessandro, Mr. Deever, Mr. Cartter, Walter Conway, James Martin and Arch McReady.★

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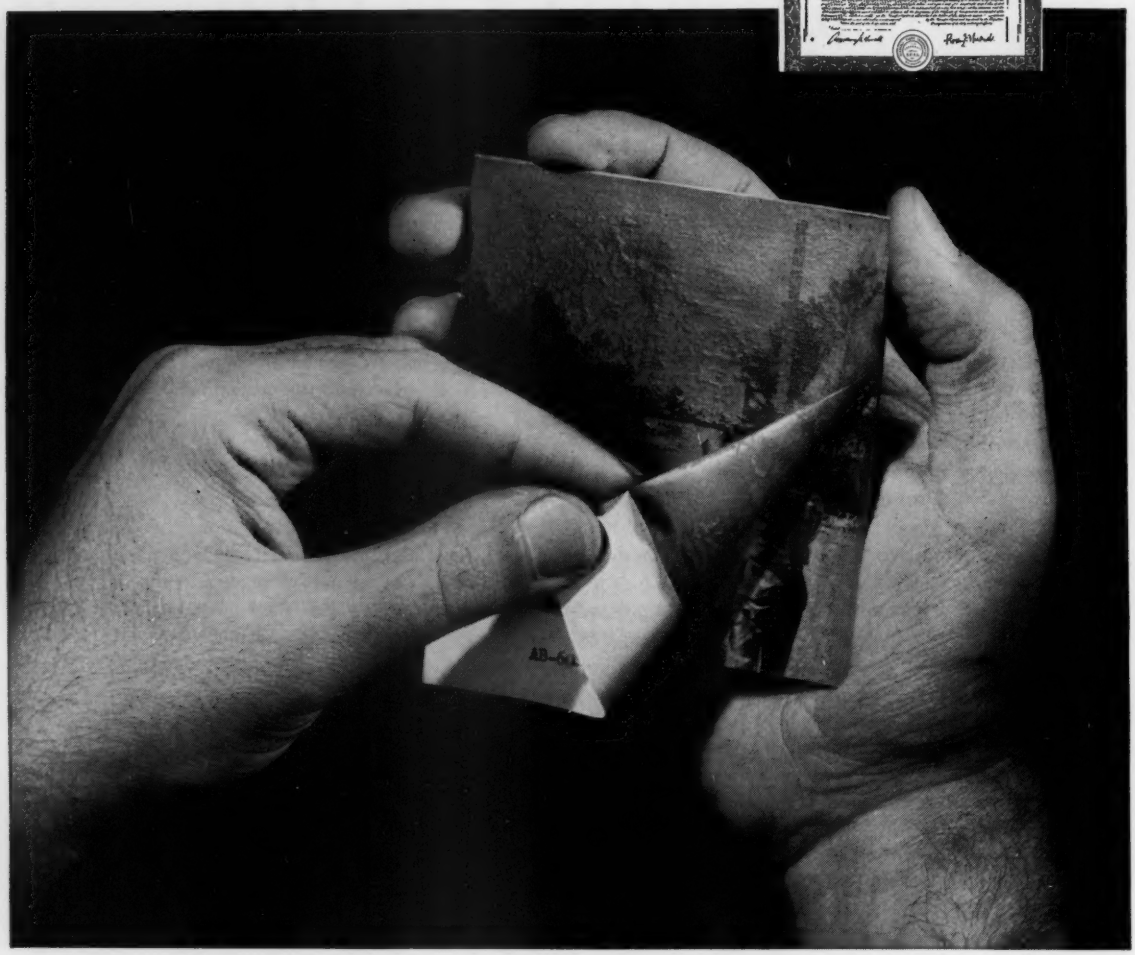

Stock earner No. 13!

Surface saver—To protect a used halftone for storage, clean it thoroughly with solvent. When dry, lay a small strip of paper along one edge, and give the entire surface of the halftone a heavy coating of regular padding cement. The strip of paper permits you to mark the identity of the cut and facilitates removal of the protective coating.

Donovan B. Fantz, Fantz Printing Company
Lima, Ohio

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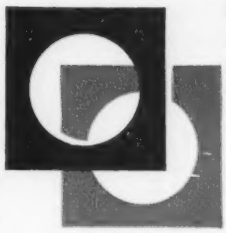

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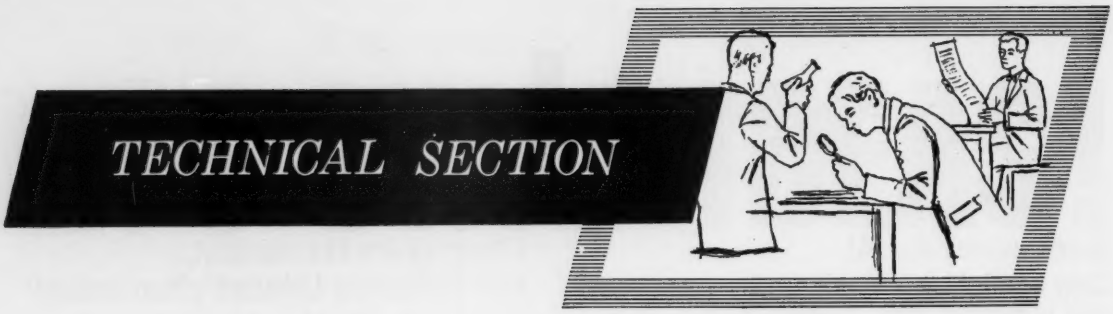


How To Get Best Results from Ink

By *Paul W. Greubel*
Interchemical Corporation
Central Research Laboratories

BECAUSE of the striking advances made in lithographic ink chemistry, failures on the press attributable to the ink itself should be very few indeed. While this is actually found to be the case, problems sometimes are encountered on the press and the question arises as to whether or not the ink is at fault. Our intensive study of problems of this nature has disclosed that there are extrinsic factors on the press which influence the performance of the ink. In short, we have been able to make inks perform well or poorly merely by changing variables within the lithographic process itself.

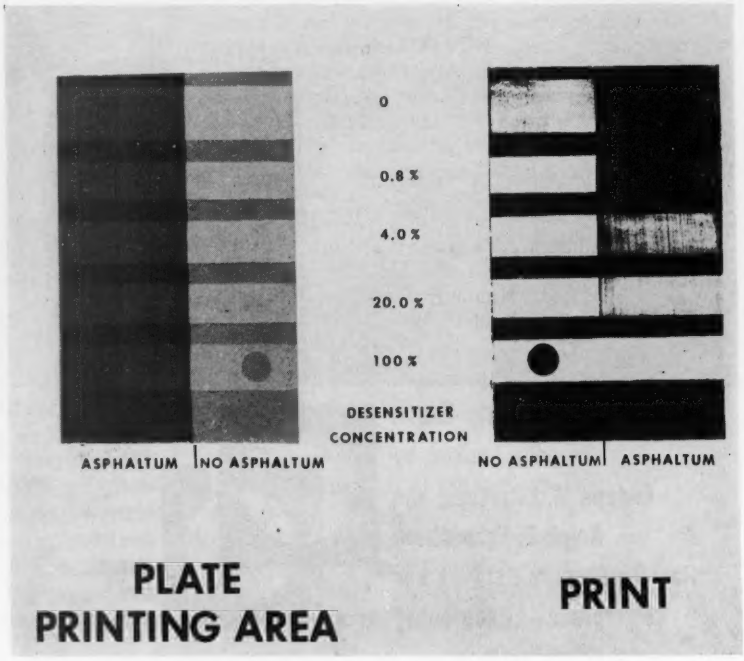
Greasing

One of the areas which we have studied has been the subject of greasing, which is also known as scumming. We started by examining the effect of variations in the non-image areas of lithographic plate surfaces and found that they can markedly influence the performance of the ink.

The first investigation involved the influence of the concentration of desensitizer on the plate. In LTF Bulletin 504, p. 154, it is pointed out that the method of applying the plate etch is just as important as having the proper chemicals in the etch. LTF states that improved desensitization is achieved by drying down the plate etch after it is applied rather than by merely working it over the plate and flushing it off. So we investigated this point and went further by studying the influence of asphaltum under various conditions of plate desensitization.

In one experiment we applied plate etch to a zinc plate on two separate areas, but flushed off just one area. Then over half of each of these areas we applied asphaltum. We found that greasing occurred in the flushed off area, but only where the asphaltum was applied. This corroborated LTF's contention regarding the undesirability of flushing off the etch and in addition showed the influence of asphaltum in combination with such a weakly desensitized area.

Now, if the plate etch is flushed off it not only results in a plate which is weakly desensitized, but also to an unknown and variable degree. Therefore, in order to study this it was important to work with controlled low levels of desensitization and in conjunction with asphaltum. For this purpose we developed lithographic



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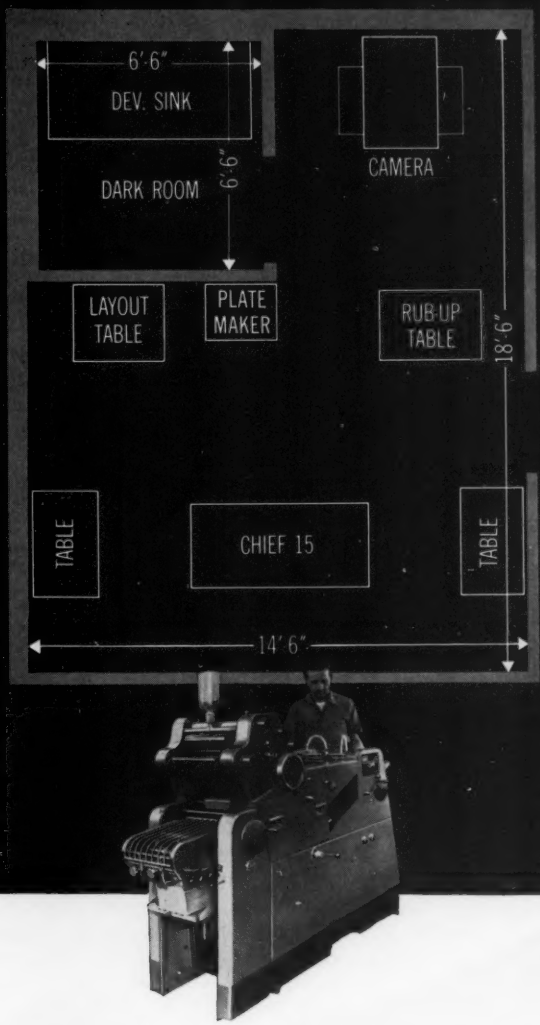

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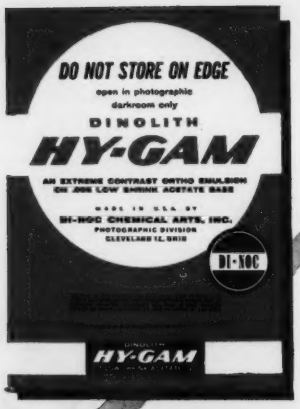

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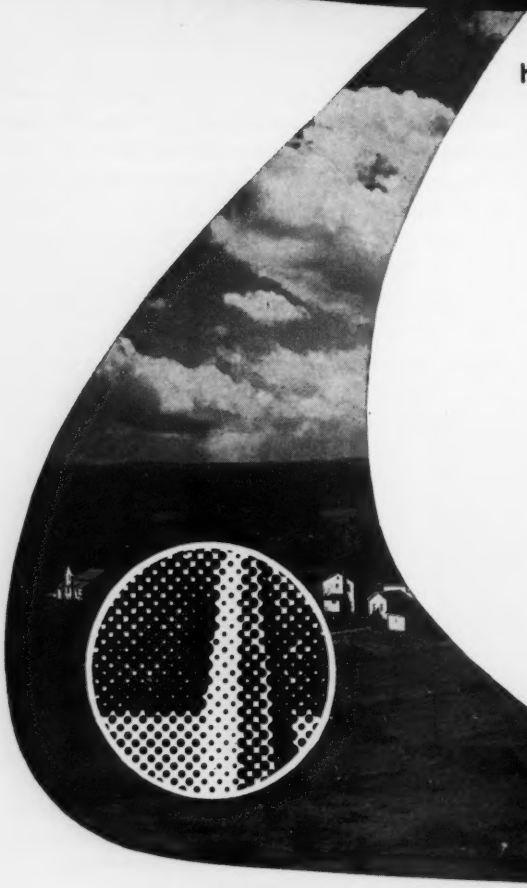

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(1)	750	cc Distilled H_2O	Dissolve with constant stirring
	41	g. CMC-7AP	
	7.8	cc. H_3PH_4 85%	Dissolve
(2)	11.3	g. Mg $(NO_3)_2.6H_2O$	
	250	cc Distilled H_2O	

Add (2) to (1) with stirring.

Figure 1.

plates having graded areas of desensitization as well as areas of asphaltum contamination.

We prepared our plate etch according to an LTF formula in Bulletin 504, p. 152, except for a change in the order of addition. The formula we used is shown in Figure 1.

This is the 100 per cent, or full strength, desensitizer. We then prepared dilutions of this, based on an infinite geometric progression with a common ratio of five, giving us 20 per cent, 4 per cent and 0.8 per cent solutions of the 100 per cent desensitizer, in distilled water. The plate was then desensitized by applying the 100 per cent to one area, and each of the three dilutions to three other areas. All desensitizers were dried down with a warm blower. Asphaltum was then applied so that it covered one-half of each area. This type of plate has been run many times and has repeatedly demonstrated that the combination of low desensitization and asphaltum is the most prone to induce greasing.

To our knowledge a detailed study of the specific relationship between weakly desensitized areas and asphaltum has not previously been conducted.

By the use of these graded plates we have been able to evolve a rating system to express the results. First, we run the ink continuously with steady application of fountain solution. We follow this by two tests which we call "catch-up tests". The first test consists of permitting the plate to ink up solid by interrupting the application of fountain solution and then reapplying the fountain solution. This shows the ability of the plate to clean-up with the same fountain solution setting.

This is followed by a second catch-up test where we again permit the plate to ink up solid, but this time we reapply excess fountain solution. By thus running the ink continuously, followed by the two catch-up tests, we can grade the non-image areas of the prints on a 1 to 10 scale, 1 being completely free of ink (no greasing) and 10 being solidly inked. As an example, the results might be read as shown in Fig. 2.

Greases With Asphaltum

In this particular example we see that the ink runs clean during continuous running without asphaltum, but greases with asphaltum on the weakly desensitized areas only. We also see that the ink cleans up incompletely after the first catch-up when the original water setting is reapplied and that it cleans up better after the second catch-up tests which is done with an increased water setting. By running this type of graded plate we have been able to demonstrate the *same ink* running both clean and dirty *at the same time*—a very important consideration with regard to greasing.

Thus by the use of these and other tests involving variables within the lithographic process, we were able to determine characteristics of the ink as well as the extrinsic factors which can influence its performance in an adverse manner. ★

Figure 2.

	With Asphaltum				*No Asphaltum*			
	100%	20%	4%	0.8%	100%	20%	4%	0.8%
Continuous	1	1	1	1	1	3	6	10
1st Catch-up	3	3	4	4	3	4	5	10
2nd Catch-up	1	1	1	2	1	3	5	10

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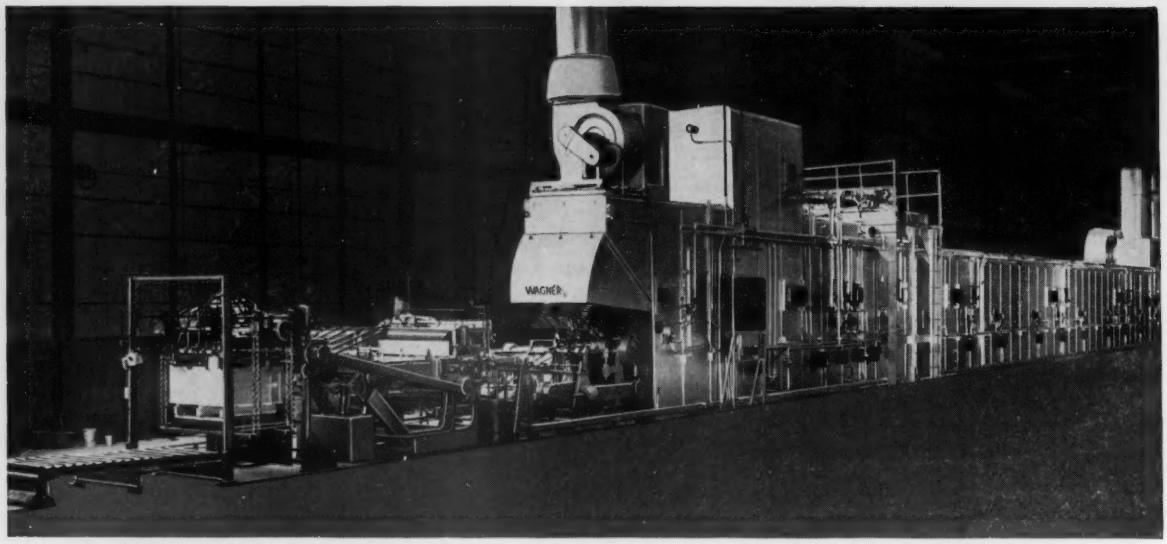

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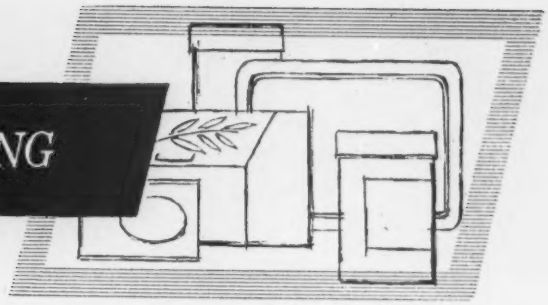


Round Tables Highlight NMDA Meeting

ANOTHER big attendance was recorded for the 26th annual convention of the National Metal Decorators Association last month in Washington, D. C. The meeting was held in the Shoreham Hotel, Oct. 17-19, with tinplate decorators and canners in attendance from all parts of the country and from Canada and several other foreign countries.

William A. Westphal, who had served for two years as vice president of the association, was named president for the coming year, succeeding Harold W. Lee. Serving with Mr. Westphal will be James G. Smith, as vice president; and George McClain, secretary-treasurer.

It was announced that the group will meet in Chicago next year.

Because of the popularity of its round table discussions at recent NMDA meetings, the group devoted a whole day to such a program at the Washington convention. This year's program was slightly changed from the informal approach of former years and, in the opinion of many decorators, was even better than before.

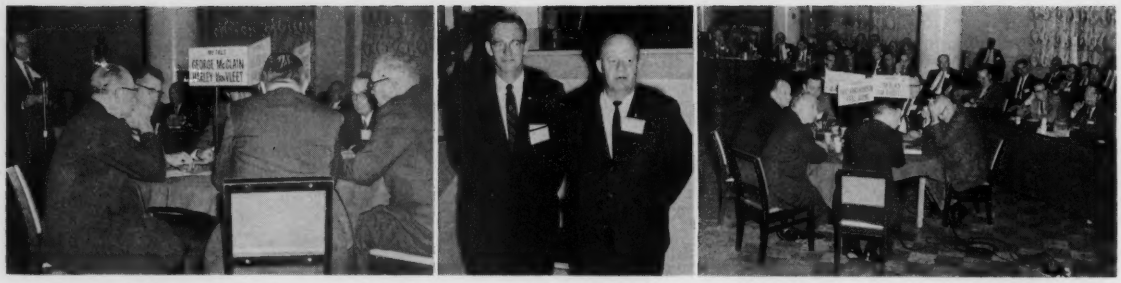
The program was held on Tuesday, with two sessions in the morning and one in the afternoon. All questions and answers were carried over the public address system, eliminating inaudibility, one of the troublesome features of previous programs of this type, at which several concurrent small groups were used. (Full details next month.)

After a closed business session for NMDA members, Dr. Clifton Ganus, Jr., opened the program with an address entitled "The Secret of American Achievement." He said that down through the history of civilization, man has been trying to have both freedom and security at the same time. Usually, however, when there is complete freedom there is no security, and the converse.

He asserted that communism, socialism and communitarianism ("living together in selflessness") have all failed in trying to present a fair portion of both freedom and security. American capitalism, however, has notably succeeded in this regard, in his opinion. He said that our system boasts economic and political stability, two necessary ingredients for this goal.

He went on to enumerate some of the basic guarantees of the U. S. Constitution, "which we all tend to take for granted, but which are non-existent in many countries of the world." He outlined some of the civil and economic liberties that are provided in the American system and called on

NMDA Officers: (l.-r.) Secretary McClain, president Westphal, VP Smith.



Popular round table discussions (left and right) at NMDA convention. Center: Thomas Bowden and Ted Ringman, president and VP of Suppliers Guild.

metal decorators to join with other businessmen in seeing that they are preserved.

Getting down to the specific field of metal decorating, Einar Wulfsberg talked about the recent food additives amendment and what it means to the decorator. Contrasted with several years ago, when many lithographers exhibited confusion and concern over the impact of this legislation, Mr. Wulfsberg was quite reassuring.

He said that basically he feels that the procedures and coatings now being used by decorators and canners are quite safe and that regulations, when they are forthcoming, will be largely devoted to describing conditions that already exist in the industry. "The goal will be to evaluate new techniques in light of current practice to be sure that they continue to meet federal specifications."

"The finishing firms have been outstanding, and the government has no lack of confidence in their activities," he emphasized.

In testing coatings, he explained, the insolubility of the coating (can enamel) is an important factor. "So far, in our testing, we have come across no problems in this regard."

The amended legislation came about after the war when "convenience foods," packed in all sorts of new containers, started to gain in popularity, he said.

There was great concern, he said, that the new substances in these foods might not be safe. Many can coatings are not safe as far as individual chemical components are concerned, he noted, but in combination they have been found to be highly insoluble and hence quite safe.

"The resultant coating formulation is what counts, not the individual chemicals that go to make it up."

The coatings are tested by determining their solubility in solvents simulating those found in foods. In addition to coatings, the sealing compound found in side sealing cement should not come into contact with food, or if it does, should be insoluble enough to be safe, he cautioned.

Exterior coatings—those used in the decorating of the can label—are not generally under the province of law because, of course, there is no reasonable expectation that they will come into contact with food.

Looking to the future, Mr. Wulfsberg predicted that a broad catalog of ingredients will be designated safe for use in coatings that will be in intimate contact with food. "So long as the formulation is carefully done, there is no reason to presume that there will be any trouble."

George Mattson, of the PIA staff, focused attention on the future of lithograph, with special emphasis on the picture as far as metal decorating is concerned.

He asserted that " the Amalgamated Lithographers of America might well forego a wage increase in 1961 because the wage hikes granted this year amount to more than the profits that many companies realized in 1959."

Mr. Mattson based this request on a background of labor demands year after year in metal decorating and paper lithography. Despite technological advances, the profit picture is not good, he observed, laying much of the blame at the feet of labor. In addition to consistent wage increases, he cited these other factors:

1. Reduction of the work week from 40 to 35 hours.

2. Increased vacation benefits, and health, welfare, premium, night dif-

At NMDA party: (l.-r.) Albert Materazzi, Mrs. George Thompson, Mr. Thompson, Mrs. Materazzi (all Litho Chemical); group at dinner table; D. D. Dosher, Heekin Can; F. O. Douglas, Reynolds Metals Co.; J. L. Chestnutt, Reynolds Metals; and Fred Adame, R. Hoe and Co.

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ferential and overtime pay.

3. Jurisdictional disputes between unions.

4. Inclusion of provisions in contracts, "which, if enforced, would put many companies out of business."

5. Shortage of skilled manpower.

6. Shortage of trained executive and management personnel.

7. Lack of well-defined company policies and procedures. "In many cases, management has lost its right to manage."

He said that the increased demand for products packaged in metal was a good sign that the metal decorating industry will continue to expand. "But this expansion, coupled with an expanding population, emphasizes the need for skilled manpower and well trained management leaders," he said.

He called on the NMDA to be "restless and experimental" in order to progress.

On Wednesday morning James Low, of the National Association of Manufacturers opened the meeting with an inspirational talk on the virtues of the free enterprise system. Turning to the labor situation, he said that all employes have four basic desires:

1. To have a sense of belonging.

2. To have recognition for their work.

3. To take part in new experiences.

4. To obtain security on the job.

Emil F. Sova, of Continental Can, outlined, with the use of a sample cost sheet, some methods for setting machine time standards in decorating. It is his opinion that labor costs are more controllable than any other costs in the plant. Economies can be found in this department if management will get all the information and consider it carefully.

Walter McEvilly, of Reeves Brothers-Vulcan, followed with a slide film story of the quality controls and careful manufacturing techniques that go into the manufacture of blankets, "The Heart of the Offset Press."

Dr. Howard L. Gerhart, director of research and development at Pittsburgh Plate Glass Co., spoke on another topic close to the hearts of metal lithographers—fast cure coatings—which are much in demand to keep pace with the faster press and oven speeds.

"Decorators not only want fast cure, they also want cheaper coatings and they want to be able to use them on black iron in addition to tinplate," he said. "Furthermore, they want to be assured that the coatings will not present a fume problem and that they will have resistance to chemicals and to processing operations."

Mr. Gerhart said the coatings manufacturers have their eyes on all these requirements and that they are using all the tools of the chemist and the engineer to find them.

He outlined the development of synthetic resins, since 1920, giving high praise to the new series of thermosetting acryllic resins.

In seeking to develop coatings for coil-fed stock, the coatings manufacturer is faced with the problem of trying to devise materials that will cure in 15-20 seconds instead of 15-20 minutes as before. Higher temperatures are of course needed for this.

He advised that gas-flame curing should be considered in any new installation. "We have the coatings for fast cure, if ovens can be developed to heat the tinplate sufficiently and quickly enough." He mentioned a two-stage oven, 25 feet in length, divided into sections 15 and 10 feet long.

"We need the cooperation of NMDA to scale up this laboratory model oven to the level of production equipment," he concluded.

In the final talk of the meeting, Michael H. Bruno, research manager of the Lithographic Technical Foundation outlined research progress in the lithographic industry.

He mentioned new developments in plates, including the improved zinc wipe-on plate which makes it easy to add work and has a low coefficient of stretch. He told the group that while dry-offset has not been very successful in conventional lithography, it might conceivably be combined with the new wrap-around plates for metal decorating.

As for the press, he said that the Dahlgren Dampening system has run into some problems, but that an earlier Dahlgren principle— the direct feed of water to the dampening system by a series of brushes, shows great promise. The new Dewey and Almy two-piece blanket looks good, and so far seems to perform with no danger of slur. It has both a cost and a quality advantage over conventional blankets, according to preliminary tests, he added.

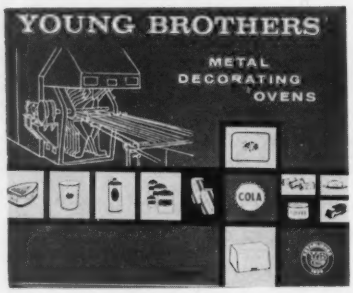
He went on to cover balanced inks, new color plotting diagrams, quality control instruments (which may have application to metal decorating presses), and other improvements.

"Perhaps it is time that metal decorators took a bigger interest in research programs that can go a long way toward improving the process," he concluded.

Donaldson Hurd, of DuPont, introduced an excellent movie on the DuPont Photopolymer plate, also mentioning, as Mr. Bruno did, the possibility of its use in metal decorating. Another film, entitled "Rhapsody of Steel," was shown to the group.

The annual banquet, featuring humorist Van Harris, climaxed the meeting. Elected to head the Metal Decorating Suppliers Guild, which once again provided an excellent cocktail party, dinner and entertainment, was Thomas Bowden. He will be aided by Theodore Ringman, vice president, and Walter Spies, treasurer. ★

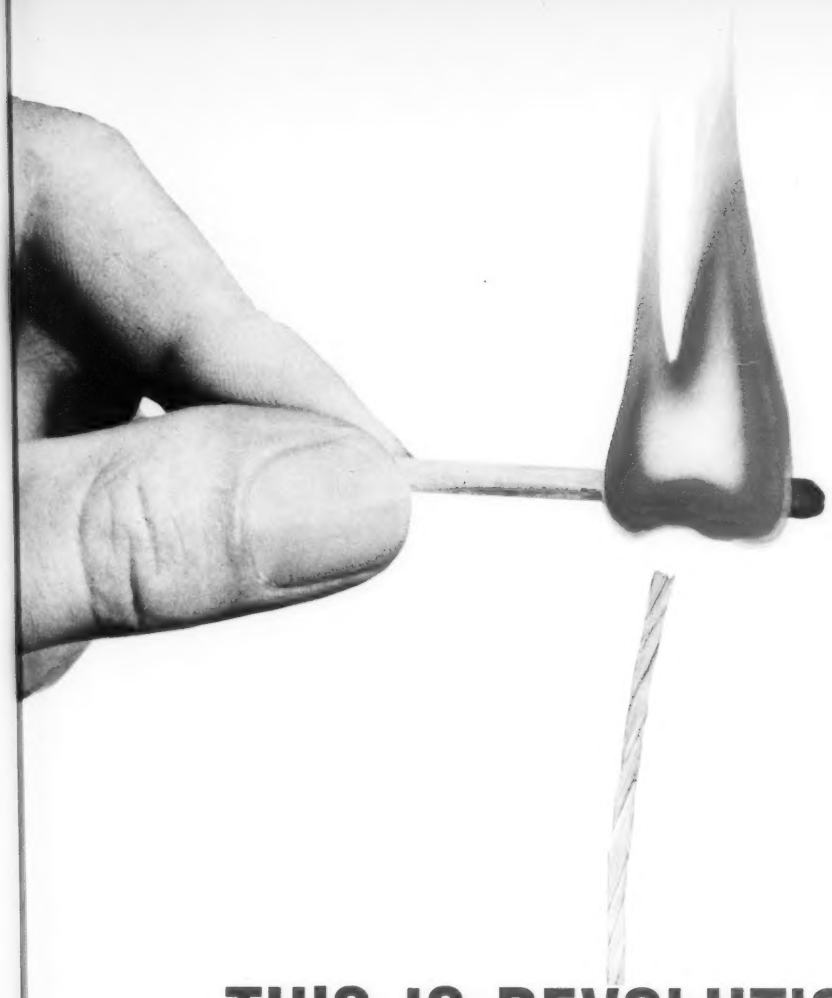
Metal Deco. Oven Bulletin



Young Brothers Co. has recently issued its new metal decorating oven bulletin.

Fully illustrated with standard and special metal decorating ovens and can body ovens, this catalog also describes accessory and auxiliary equipment.

Copies of bulletin, 9-L, may be obtained from the company at 1831 Columbus Road, Cleveland 13.



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It grew out of the appalling discovery by Mr. Barrow that nearly all book papers now in general use *will disintegrate in less than 50 years!* (A recent bulletin of the Library of Congress reports that book papers of 1940-49 already are 36% deterioriated.)

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Having found the components, Barrow consulted, among others, A. L. Rothschild, chief chemist for Standard Paper Manufaturing Co., makers of fine printing papers since 1900. Standard sent Rothschild to the Herty Foundation laboratories to work with Barrow. They made six experimental runs. Each produced paper surpassing existing commercial papers in strength and stability.

Then production runs were made in Standard's Richmond plant. The paper was found to meet or exceed specifications in every way. Under artificial aging tests developed by the National Bureau of Standards, and approved by the Council on Library Resources, the paper showed a life expectancy of more than 300 years!

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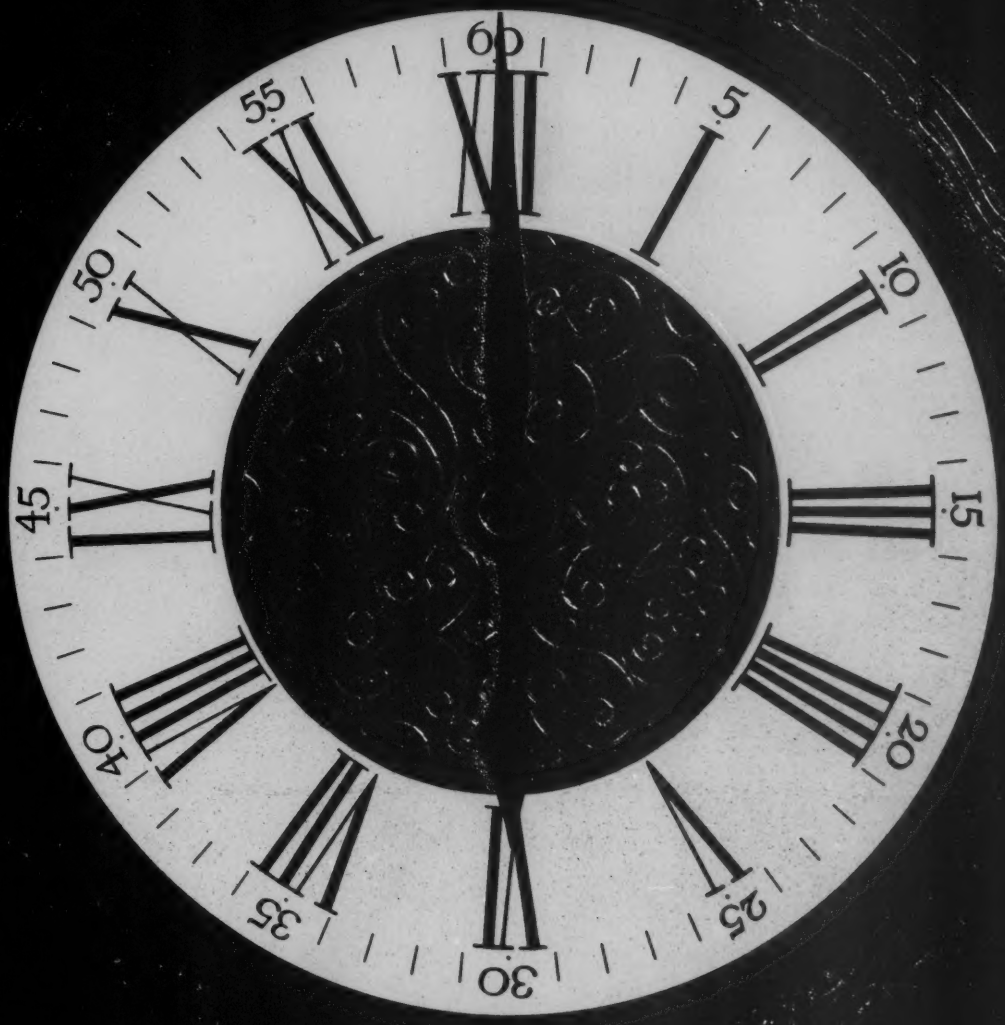


Successful Lithographers are clock watchers

They know time eats into profits. To save time—in platemaking, make-ready, presswork, remake—successful printers like Dulany-Vernay Company, Baltimore, have switched to presensitized plates of ALCOA® Aluminum. There's more information on the reverse side. Please turn the page.

Aluminum Company of America

ALCOA ALUMINUM

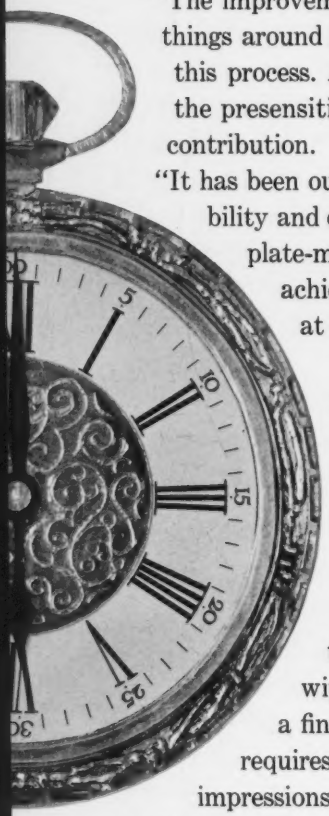
LITHO QUALITY

"We switched to Aluminum Presensitized Plates five years ago"

John F. Miller, Executive Vice President, Dulany-Vernay Co

"With presensitized aluminum plates, our jobs g on the press faster. That puts me in top competi position," says Mr. Miller, shown with John Sapo ski, foreman, Plate Department.

Careful craftsmanship is the rule at Dulany-Verna Nelson Fried (right), pressroom foreman, chec press sheet with Pressman George Bauer. Alum num is easier to handle and store, reports Joh Hanrahan (below), because it weighs only one-thi as much as other lithographic metals.



Dulany-Vernay, 51-year-old Baltimore printing firm, switched to presensitized plates of ALCOA Aluminum five years ago, writes John F. Miller, executive vice president. He gives some good reasons:

"The improvements in offset reproduction have certainly changed things around here. We have converted most of our equipment to this process. And of all the advances in offset printing, I think the presensitized aluminum plate has made the greatest single contribution.

"It has been our experience that because of aluminum plate durability and dimensional stability we have been able to 1) reduce plate-making time; 2) reduce press make-ready time; 3) achieve a faster and more accurate registration of colors at the press."

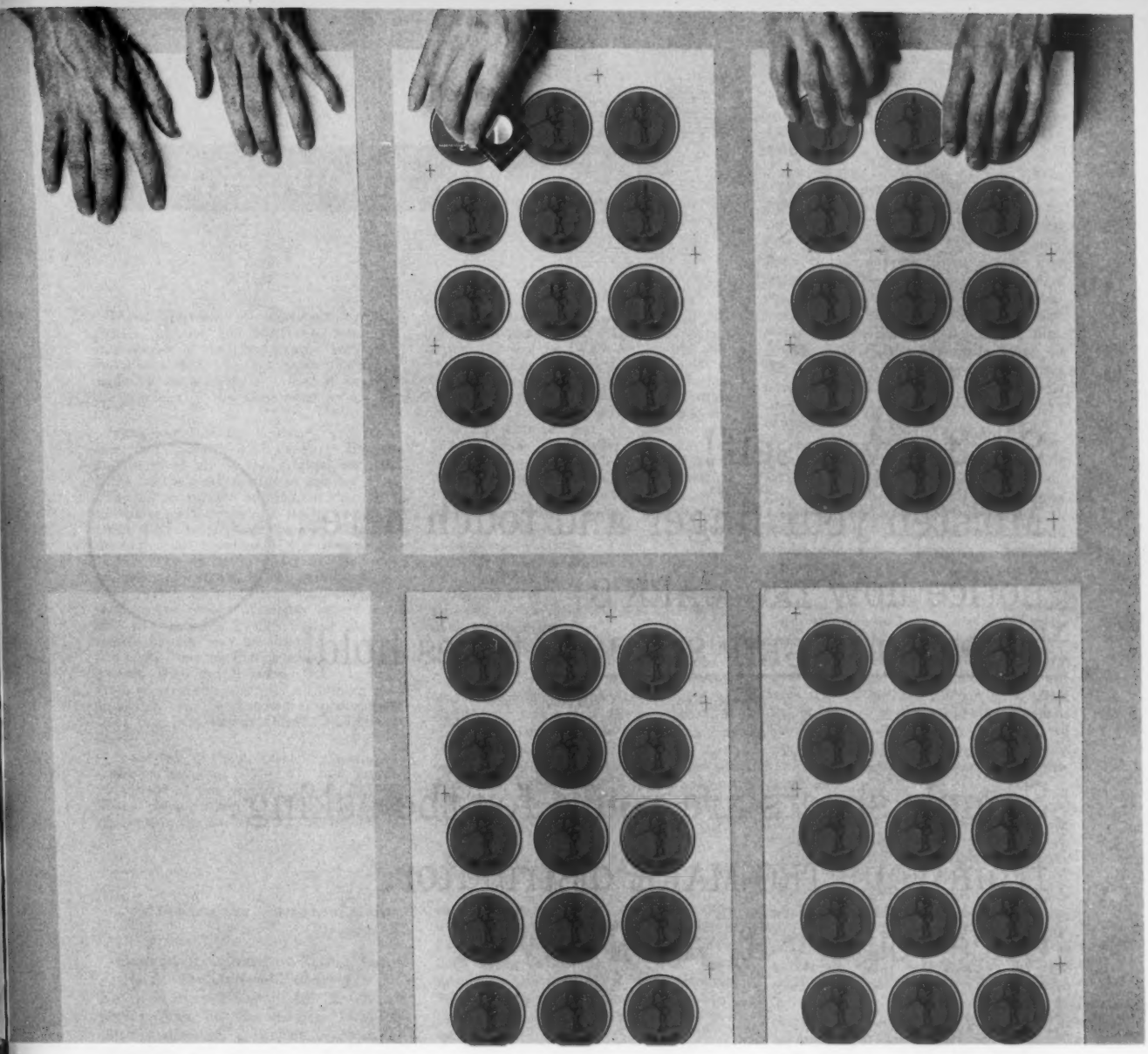
Aluminum made possible the remarkable presensitized plate, which eliminates coating equipment, requires less exposure time, produces top-quality printing. Lower cost and faster processing make the presensitized plate first choice for a surprising number of jobs.

Today, offset plates of ALCOA Aluminum are used in most good printing plants. There are sizes and types for every job—surface, deep-etch, presensitized, wipe-on, bimetallic and trimetallic. Aluminum takes a fine, sharp, deep grain . . . permits a finer screen . . . requires less water, ink and pressure . . . gives clean, sharp impressions with good color "punch" on longer runs.

Litho plates of ALCOA Aluminum are available through reliable manufacturers and suppliers. Let us send you a list of these suppliers and our new folder about aluminum plates. Write ALUMINUM COMPANY OF AMERICA, 1851-L Alcoa Building, Pittsburgh 19, Pa.

ALCOA ALUMINUM

LITHO QUALITY



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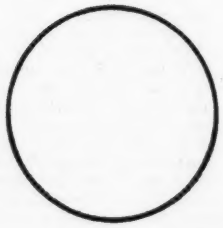

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Photography, Tone and Color Correction

CHECKING HALFTONE DOT VALUES. James F. Nolan. *The National Lithographer* 65, No. 1, January 1958, pp. 18, 22, 107 (3 pages). This installment gives hints on color analysis of a subject in terms of proportions and strengths of the various colors. A graph shows the relationship between densities and percent dot size. Instructions for making halftones positives from masked separation negatives with the aid of a contact screen complete this installment. 3 Illustrations.

TONE REPRODUCTION REQUIREMENTS OF THE BLACK PRINTER—PART I. J. A. C. Yule. *Graphic Arts Monthly* 32, No. 2, February 1960, pp. 66, 68, 70, 72, 74 (5 pages). The tone-reproduction requirements for the black printer in four-color printing are worked out with the aid of an additivity diagram. The optimum tone reproduction for use when the density range of the original is unreproducible is discussed. 5 Diagrams, I Reference.

Part II—*IBID* 32, No. 4, April 1960, pp. 84, 86, 88, 90 (4 pages). Takes up the relation of various colors to the gray scale. An "ortholuminous" record uses the black printer throughout the tone scale, but darkens areas unnecessarily. A "gray component" black printer would be better, but is hard to prepare photographically (easily done on a scanner). The ideal black printer is between these two extremes. Several ways of achieving such a black printer are explained. I Diagram, 5 References.

Part III—*IBID* 32, No. 5, May 1960, pp. 52-4, 56, 58, 60 (6 pages). In four-color work, the three colors should be reduced where black is to be printed (undercolor removal). This is done by combining a mask made from the black printer negative with each of the other negatives. Varying needs for undercolor removal are discussed. 4 Diagrams, 3 References.

COLOR MASKING: PART 5—THE FUTURE OF COLOR CORRECTION IN THE LIGHT OF PRESENT DAY PRACTICE. Frank H. Smith. *Graphic Arts Focal Point* #5, 1960, pp. 12-16 (5 pages). Three methods of color correction are: By hand, by masking and by scanner. Hand correction is adequate for paintings, interferes with the photographic quality of a color photograph; which is better masked or scanned. The time factors in masking and scanning methods are discussed. Suggestions are offered as to methods of organizing masking work for the saving of time. One method, the "Vara" mask system is explained in some detail with the aid of illustrations. Electronic scanning is discussed in relation to costs.

*PRE-SCREENED FILM. K. R. Yanson. *Poligraf. Proizvodstvo*, 1958, No. 1, 18-20 (in Russian); *Photographic Abstracts*, Part I, 1960, page 24. The nature and mode of use of pre-screened graphic arts materials are explained. Work on these is proceeding at the All-Union Research Institute for the Printing Industry, but mention is made of the Kodalith Autoscreen film, already in production. Processes based on the Albert effect and on the Clayden effect have been tried, and preference appears to be given to the Clayden effect as the simpler to manipulate.

NOTE ON RECENT DEMONSTRATIONS OF COLOR MECHANISMS. S. Berg and J. Forkner. (In "Letters to the Editor.") *Journal of the Optical Society of America*, Vol. 50, No. 4, April 1960, page 394. An attempt to repeat the Land experiments of two-color projection using 80 two-inch squares of twenty-four colors randomly distributed, saturated and unsaturated, black, white, gray; photographed through red and green filters. When the two positives were projected, one through a red filter, the other with white light, colors other than red were seen. Other experiments were tried. Explanations, including eye adaptation, based on two-color theory, appeared to contradict Land's contentions that color theory was inadequate to explain the phenomenon.

*PRESCREENED MATERIAL FOR HALF-TONE PROCESSES. British Patent 800, 183 (U.S.A. February 12, 1954). R. E. Maurer (Kodak Ltd.). *Photographic Abstracts*, Part 4, 1959, page 272. Sensitive photographic material, intended for halftone reproduction is prescreened by exposure to short-wave radiation through a halfton screen so as to become highly susceptible to the Herschel effect. Alternatively the emulsion layer may be uniformly prefogged by short-wave light and then prescreened by exposure to long-wave radiation through a half-tone screen. Either form of the prescreened material is used by giving it a long wave-length exposure to the continuout tone image followed by development, whereby a direct positive image is obtained.

*COLOR IMAGE SYNTHESIS WITH TWO UNORTHODOX PRIMARIES. A. Karp. *Nature* 184, August 29, 1959, pages 710-2; *Ansco* Abstracts, Vol. 19, No. 11, November 1959, pages 475-6, 2 pages. Many facts reported by Land have been verified at Cambridge University Engineering Laboratory. For example, the red-and-white primary combination causes the appearance of bluish and greenish hues on a screen or in Kodachrome photographs, although when examined in isolation each image point reveals only mixtures of red, white and black. With step wedges overlaid by a white or black network to form detached squares against a black background, the projection results were monochromatic, as in Land's wedge experiments without network, but

against a white background bluish-green hues appeared. With the use of gelatin filters of various colors also, only mixtures of the original primaries were seen without the white background, but against white, colors were seen which were mixtures of one primary with the complementary of the other. In natural scenes highlights on glossy objects can act as white cues, and in experiments special attention was paid to the warmest spot, the coolest spot and the white cue, as filters were changed and/or light intensities varied

*Photomechanical Color-Reproduction Process. French Patent 1,158,810, Filed August 14, 1956, J. Dannenmuller. *Monthly Abstract Bulletin*, Vol. 45, No. 12, December 1959, page 524. Multicolor picture reproduction is achieved by a combination of photographic and graphic-arts printing processes. The primary or mixed colors are printed by a conventional process —offset or heliotype—using a support made sensitive to light of a supplementary color, e.g., black or brown, by chemical or physical development. For example, a four-color picture may be used that has three screened primary colors and a photographic black, unscreened color.

*Photo-Mechanical Screening. British Patent 813,116, July 8, 1955. K. and E. Schumacher (Klimsch and Co.). *Photographic Abstracts*, Part 6, 1959, page 397. Improvement in detail and definition of halftone reproductions is claimed if the screen is formed with the opertures smaller than normal, say one-ninth of the screen area, and the screen is moved on a defined path during exposure so as to give an integrated dot. Suitable screen arrangements are described.

*Color Vision and the Printer. D. Farnsworth. *Print.Tech.*, Vol. 3, No. 1, Sept. 1959, pp. 17-24; discussion pp. 24-7; *Printing Abstracts* 14, No. 11, November 1959, page 905. Color blindness, color discrimination, color description, metamerism and factors affecting color judgment (lighting, area of color, induced contrasts—simultaneous, successive—and the effects of surround) are discussed.

*On Making Halftone Separation Positives from Color Negative Film by the Direct Method. K. Koseki and S. Takeuchi. *Bull. Tech. Ass. Graph. Arts*, Japan, Vol 1, No. 1, December 1958, pp. 6-11 (in Japanese); *Printing Abstracts* 14, No. 11, November 1959, p. 895. Good results were obtained in an attempt at making halftone separation positives from color negative film using a masking method without hand retouching. The color negative films were Ektacolor, Agfacolor negative. Fujicolor negative and Konicolor negative. The one-stage masking method was used for the higher contrast film and the two-stage method for the lower contrast one, and the color correction masks were developed in a coupling developer which formed a magenta dye for yellow, magenta plates and blue dye for cyan plates. Screening was done with a grey contact screen through the camera using a fluorescent light source. As a guide to tone and color reproductions the gray and color scales were used. Consequently, the tone-reproduction curve was not linear but had a toe and a shoulder, and the shape of this curve was very important. The prints showed excellent results as regards sharpness and were rich in detail. However some problems in color reproduction were apparent.

*Process and Apparatus for Photomechanical Screening. British Patent 813,116, Filed July 8, 1955. K. Schumacher; E. Schumacher. Assigned to Klimsch & Company. *Monthly Abstract Bulletin*, Vol. 46, No. 2, February 1960, page 86. A ruled screen is described which has very much smaller windows than usual (about 1/10 of unit screen area). The screen is used almost in contact with the sensitive material, and each window thereby generates the "elementary dot." The screen is moved during exposure in such manner that the window traces out a spiral. The tone reproduction varies as the speed of movement of the screen, or as the light intensity is varied.

Planographic Printing Processes

*Photomechanical Keyline Prints. U.S. Patent 2,927,020 96/32 8/16/54-3/1/60. D. A. Zilli; Toronto, Ont. *Ansco Abstracts*, Vol. 20, No. 3, March 1960, page 159. Instead of blanking out solid areas in a two-tone original with white ink, leaving only narrow keylines, a photographic process is used. It involves making of a print from a high-contrast negative on low-contrast bromide paper with a solarizing exposure and a high-contrast developer. Removal of the fog within the keyline areas of this paper print by Farmer's reducer leaves a keyline image from which two printing plates are made, one for printing the line image in one color, the other for printing a differently colored background. It is believed that during the solarizing exposure diffusion of light occurs around the marginal edges of the letters resulting in a less exposed image of greater resistance to the reducer than the overall solarization fog.

*Photolithography. British Patent 793,550, June 9, 1955. A. Spencer (Gestetner Ltd.). *Photography Abstracts*, Part 4, 1959, page 270. In process for production of offset lithographic prints a cellulose triacetate film base is coated with a linseed-oil-based subbing layer followed by a coat of silver chloride-gelatin emulsion. After exposure the image is developed and development stopped with acetic acid and the unexposed areas removed with warm water down to the oleophilic subbing layer. There is thus obtained a negative record in hydrophilic relief and a complementary positive record in oleophilic intaglio which holds the ink.

*Improvement in Planographic Printing. British Patent 798,339 (Denmark, July 22, 1955). C. E. Larsen. *Photographic Abstracts*, Part 4, 1959, pages 269-70, 2 pages. The lack of serviceability of some planographic plates has been traced to electrolytic corrosion, which is found where fluctuations of voltage difference occur between the attached printing plate and the metal parts of the machine. This is corrected by forming an electrically insulating barrier in the electrical path from the plate through the frame of the machine to the inking roller, measuring the electrical potential across this barrier and keeping the electrical potential across the barrier substantially constant by means of an adjustable potentiometer connected to a fixed source of voltage.

*Experiences with the Mikral-Plate. Anon. *Fachberater*, No. 73, July-August 1959, pp. 49-50 (in German); *Printing Abstracts* 14, No. 11, November 1959, p. 889. The following advantages are claimed: (1) An 18-step screen wedge can be used in the reproduction process, which means a greater tone-range; (2) as the result of the micro-grain, all the tone values of the original are reproduced with absolute fidelity; (3) There are no tone variations during printing. Proof and machine print are equal in quality; (4) Emulsification of the ink is inhibited owing to the use of the minimum of water; (5) The run can be increased by 30-50% as compared with zinc.

Paper and Ink

Papers for the Lithographer. Ronald I. Drake. *Lithographers' Journal* 44, No. 9, December 1959, pp. 16, 19, 20, 21, 22, 54 (6 pages). The first part of this article takes the form of a somewhat detailed listing of the various types of papers generally used in lithography with their characteristics and common uses. Printability factors and paper conditioning, storage and handling are discussed.

*Properties of the Requirements for Offset Printing Papers. E. Lemke. *Arch. Druck Pap.*, Vol. 96, No. 2, 1959, pp. 181-4, 187-8 (in German); *Printing Abstracts* 14, No. 9, September 1959, p. 714. The properties required in offset papers and the possibility of improving them are indicated. The factors (e.g. flatness, curling, mechanical stretching in the printing machine, pick resistance, moisture absorption by the surface, whiteness, smoothness, etc.) affecting the quality of the print are discussed.

*Paper Curl Controlled by Chemical Stabilizer. Anon. *Packag. News*, Vol. 6, No. 6, June 1959, p. 39; *Printing Abstracts* 14, No. 9, September 1959, p. 715. Stub-U-Cel, made in the U.S.A. by the Upson Chemical Corp. stabilizes paper dimensionally by 'penetrating the individual molecules of the cellulose.' It is particularly useful for laminates of metal foil and paper. The degree of treatment applied depends on the degree of stability required; paper can be impregnated throughout or to a controlled depth on only one side or both sides of a sheet. It is a glycol dicarboxylic acid monoester, dissolves in water and is applied to paper with ordinary paper mill equipment.

*Fading of Yellow in Four-Color Prints. Schreiner. *Fogra Ber.*, No. 685, Apr. 29, 1959 (in German); *Printing Abstracts* 14, No. 9, September 1959, p. 710.

(*Continued on Page* 132)

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WESTERN GEAR CORPORATION

Todd Co. of Canada Established in New Plant

TONS of business forms and approximately half a million checks a week are being turned out in the new printing plant of The Todd Co. of Canada, Ltd., located in Greenfield Park, Quebec.

The bulk of these checks are being manufactured for the exclusive use of chartered banks across Canada. Many, however, are tailor-made for commercial customers.

The plant was first established in Montreal, then moved to nearby St. Lambert where it remained until the Greenfield Park plant was completed recently.

Plant manager E. R. Lewis points out, that the move to Greenfield Park was completed in only 48 hours. Operations were discontinued in the St. Lambert plant on a Friday and resumed in their new location on Monday morning. Mr. Lewis gives great credit to company employes who organized, supervised and completed the transfer of tons of machinery and paper without confusion and with little deviation from the original carefully prepared plans. The new building, which houses both offices and plant, covers 16,700 square feet of floor space.

With few exceptions, the 53 employes are French-Canadians who have been with the company for many years.

Operations at the plant are organized to handle the processing of checks and business forms from the artist's conception to the finished product.

Some checks are designed in Todd art studios in Montreal and Toronto and processed from finished artwork at the plant. Others, plus all ledger and journal sheets, are designed in Greenfield Park.

A paste-up of the form is made on a varityper or headliner. The paste-up is photographed and the necessary ruling is done on the negative in accordance with the customer's exact specifications. Offset plates are then prepared from the negative.

These plates are run on as many as three different offset presses, one of which is a new Harris press purchased at the time of the move. It incorporates the latest developments in offset printing and can handle as many as 40,000 checks in one hour.

At this stage in production, special safety features are built into checks produced on "Greenbac" or ABC check paper. These features are designed to discourage forgers, who last year passed $70,000,000 worth of bogus checks in Canada.

"Greenbac" was developed by the Todd Company in 1921 and reportedly has never been successfully counterfeited. It is printed front and back with contrasting colors on base paper water-marked to prevent imitation of the genuine. To prevent chemical alteration, "VOIDS" are hidden under camouflaging tints and appear when the check is tampered with. Even erasures produce tell-tale white marks.

ABC checks receive much the same careful protective treatment. They, and the ABC system of wage payment which they have made possible, were developed by the company as a means of combatting payroll robbery. The key to the system is the identification card, which bears the same border and features as the check itself.

This card enables ready identification of the payee and makes it relatively easy to cash an ABC check under circumstances where others would likely be refused.

From the offset presses, both checks and office forms go to letterpresses for imprinting and numbering. Even the type used in this operation is set in the plant.

Cutting and trimming of finished products is handled by one of two paper cutters, each able to handle up to 1,000 sheets of paper at one time.

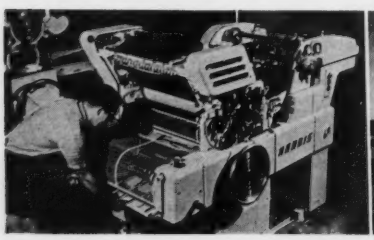
The plant has other specialized operations, but the vast majority of products then go to the modern bindery to be inspected and collated. Office forms are assembled and wrapped. Checks are bound in booklets, pads or large binders which facilitate their use.

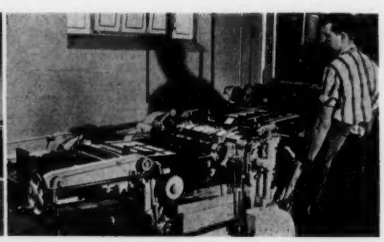
Some, such as the Hadley precollated checks, are assembled in banks of 25 to become part of board posting systems which enable a single posting to make simultaneous entries on a pay check, a journal and a ledger.

Of special interest is the turntable perforator. This machine perforates checks both vertically and horizontally in one single operation. It is kept extremely busy all day long and often operates through a second shift.

Extreme care has been taken to safeguard check stock from both fire and theft. A sprinkler system has been installed throughout the plant, and a foolproof burglar alarm connects directly with the local police department.

The new plant can be expanded outward and upward to meet the needs for future growth.





Left: Recently purchased Harris press running newly designed ledger sheet.

Center: The new Todd plant recently occupied in Greenfield Park, Quebec.

Right: Hot wax carbon applicator coating a run of business forms.

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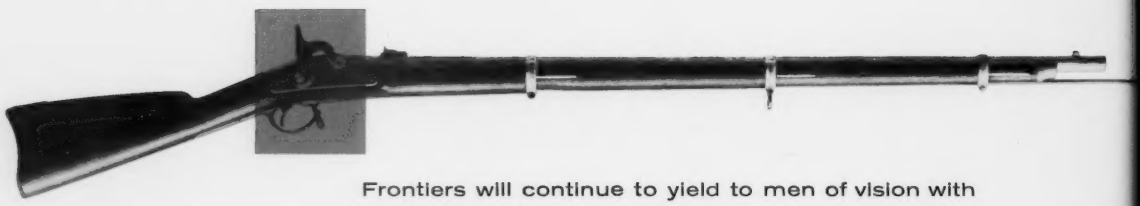

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LITHO CLUB NEWS

Discuss Quality Control, Web-Offset and Fotosetter

THE Chicago Litho Club launched its fall educational sessions Sept. 20 with a "Harris Night program at which three representatives of Harris-Intertype Corp. were the speakers.

In a discussion of "The Importance of Control in Lithography" C. A. Lofgren, general sales manager, Harris-Seybold div. stressed the important role of continuous research in the establishment of quality control methods. The best finished products, he pointed out, depend on materials, equipment, methods and men. Properly combined, these four factors will aid in yielding a top notch finished product. Among the more important reasons for control, Mr. Lofgren said, are the upgrading and increased uniformity of the product; the automation of the process with resulting increased production; the ability to make more accurate estimates; and, most important, increased profit.

Herbert A. Asten, manager of web offset sales for the Cottrell division, followed Mr. Lofgren with a survey of what is new in web offset equipment. Basic types of web offset presses currently available, he said, now include blanket to blanket perfectors of horizontal or vertical design and blanket to steel, of in line, common drum and split drum design. The advantages and disadvantages of these types were discussed with reference to the best probable application of each type.

Third of the trio of speakers, was Richard M. Jones, assistant to the manager of Intertype's midwestern division, who reported on the Intertype Fotosetter and its specific application in the lithographing plant. Photographed typesetting, Mr. Jones declared, yields printed matter of unsurpassed quality, eliminating spreading, fuzzing, undercutting or other distortions in the photomechanical process. To illustrate the advantages, versatility and economic feasibility of the Fotosetter, he cited many applications of the equipment in use today.

Club president Emil Winter of Sleepeck Offset Corp., opened the meeting with a brief business session at which committee chairmen reported on the social events staged during the summer. These included the second annual family picnic held in June at the Lasconia Lodge on Lake Benedict, near the Illinois-Wisconsin border, and the annual golf outing Sept. 10 at the Nordic Hills Country Club. Mr. Winter then turned his gavel over to Joseph J. McConnaughey, Jr., Chicago sales manage for Harris-Seybold, who introduced the three speakers.

A "Miehle Night" program has been planned for the February meeting and other special "nights" will deal with the W. M. Welch Mfg. Co's densitometer and the DuPont Dycril plate.

Connecticut Valley

Feature Production Panels

The Connecticut Valley Litho Club used a new approach in discussing production problems at its October meeting. Instead of the usual panel presentation, the various speakers were placed at tables around the meeting hall where members were able to present problems for solution.

There were five areas of production covered. Camera was handled by Benjamin Fino, City Printing Co.; stripping by John D'Amato, Van Way Co., and Herb Brody, City Printing Co.; dot etching by Thomas Massimin, Radio Printing Corp.; platemaking by James Bamber, Rich Litho Co., and Herb Bauer, Connecticut Printers; and press by Frank Poll, Meridan Gravure, and John Magnani, Milton Bradley Co.

Silvio Damato was elected the new president of the club at the September meeting. Other officers elected were James Bellany, first vice president; Thomas Massimin, second vice president; Irving M. Gross, secretary; and Fred Renkowicz, treasurer.

Elected to the board of governors were Sebastian Fino, Anthony Gagliardi, William Newton, Robert Stirton, and Edward Yuskevich.

Washington

Examine Lightweight Papers

James P. Callahan, sales manager for fine papers and T. E. Hall, assistant quality control manager for the Ecusta Paper Division of Olin Mathieson Chemical Corp., presented a program at the Oct. 25 meeting of the Washington Litho Club, which pointed out to the membership that "You Must Learn to Run Lightweight Papers."

Mr. Callahan explained the relationship of lightweight paper to heavier stocks with regard to cost and application. He emphasized the growing importance of lightweight papers in direct mail advertising and other mailing pieces, due to steadily increasing postage costs.

Mr. Hall, who has worked with lithographers throughout the country who are running lightweight papers, including cigarette and Bible papers, explained the various special problems involved in the effective use of lightweight paper, He also explained the efforts made by the manufacturers of such papers to achieve quality control, during production.

The nominating committee of the club has submitted a list of those proposed as new officers. Those chosen are: Walter Conway, president; Arthur Nugent, first vice president; Lewis Powers, second vice president; C. Thomas Mitchell, secretary, and John Williams, treasurer.

Those nominated to the board of governors from government printing shops are: Clifford Chapman (incumbent), Charles McFadden (incumbent), Charles Bennet, John T. Simonds and Stuart Rich.

Those nominated to the board from commercial plants are: Robert A. Luciani (incumbent), Richard Patschke (incumbent), Emil Rykosky (incumbent), William E. Bailey, and John H. Tancill.

Shreveport

Discuss Chemical Use

Edward Deavers, Litho Chemical Co., Dallas, Texas, discussed the proper use of the new chemicals which have been introduced to the lithographic industry, at the October meeting of the Shreveport Litho Club.

St. Louis

View Ektalith Method

St. Louis Litho Club held its first open meeting of the season Oct. 6 at Lemmon's Restaurant in South St. Louis. C. P. Ramsdell, Ektalith representative for Eastman Kodak Co., presented the Kodak New Ektalith method, the process that makes a paper offset master Groman original in less than two minutes.

The club will elect officers for 1961 at the November meeting.

Club members visited the Hopper Paper Mill, Taylorville, Ill., on Oct. 15. The day long trip included dinner and refreshments.

Susquehanna

Discuss Future of Litho

William Stevens, The Miehle Co., discussed the "Future of Lithography" at the first meeting of the season of the Susquehanna Litho Club, held late in September.

In his talk Mr. Stevens covered the latest developments in letterpress. sheet-fed gravure, flexography, and web-offset, and discussed their relationship to the future growth of lithography.

The next meeting of the club is planned for Nov. 3 in Reading, Pa.

Cleveland

Visit Harris-Seybold Plant

The Cleveland Litho Club, joined by the Cleveland Club of Printing House Craftsmen, were the guests of the Cleveland branch of the Harris-Seybold Division of Harris-Intertype Corp., Cleveland, for dinner and a tour of its plant on Oct. 20.

At the plant, the company displayed and demonstrated several of its presses including a new model LUM 25 x 38″ two color and a new wrap-around relief press. The tour emphasized the company's concentration on the importance of quality control in printing and the design of its equipment to make it easier for the printer to achieve effective quality control.

The September meeting, with its concentration on ink was a real educational success, according to members of the club.

The list of points to remember when ordering ink, were listed by Donald Morrison, Morrison Printing Ink Co., as follows: order the exact quantity needed; supply a good color sample; indicate the nature of the copy; supply a sample of stock to be used; indicate type of plate being used; indicate the nature of finish on the printed piece; indicate the sequence of color printing; indicate the intended use of the product; and allow enough time for an exact color match at the maker's plant.

Edward Dunning, Interchemical Corp., Chicago, explained the importance, for food packaging printers, of making certain that inks used are in accordance with regulations of the Pure Food and Drug laws. He advised that the Food and Drug Administration has published a list of ink ingredients which are acceptable for use in food packaging.

Ron Perrin, Switzer Bros., Cleveland, explained that while Dayglo inks are not generally practical for lithographic printing (they are better used in silk screen) they can be used effectively, if jobs are properly planned beforehand.

G. L. Erickson, Braden Sutphin Ink Co., Cleveland, considered the new field of magnetic inks, their present uses and possible future applications. He said that while magnetic inks are used now for check sorting in banks, the future may prove them to be effective in a number of other sorting and classification applications, as yet not developed.

He pointed out that magnetic sorting, such as is used today, has reduced the amount of error from the usual 3 to 5 in every 100 (with human sorting) to only one in every thirty to forty thousand. This, he said, will obviously make such systems valuable to other businesses which require wholesale sorting and filing operations.

New members of the club are John D. Hemmler, Printing Production Magazine; Albert J. Meyers, Brewer Chilcote Paper Co.; and Ralph C. Honeck, and Donald M. Johnson, Roberts and Porter Co.

Detroit

See "Paper Work" Film

Champion Paper and Fibre Co., represented by H. W. Schnetsky, Central district sales department, presented the film "Paper Work" at the October meeting of the Detroit Litho Club. The film traced the manufacture of paper from the forest to the consumer. It also showed the great variety of uses to which paper is put in our economy.

The film was followed by a discussion of the relative merits of various types of paper in relation to the printer.

The September meeting of the club, the annual Ladies Night, centered around a presentation of Frank W. Ready, Detroit Edison Co. Mr. Ready demonstrated the effects of various wavelengths of light on objects we see.

You'll save money at the copy board with...

NATIONAL CARBON ARCS!
TRADE-MARK

Because when you team these "National" High Intensity carbon arcs with modern arc lamps you'll realize *greater speed, greater efficiency* and *increased production* for all your copy board shots.

This excellent light source reduces exposure time. It also provides a point source of light which assures sharper reproductions requiring less retouching and handwork. These benefits add up to improved scheduling and increased capacity from the copy board to the platemaking department.

For fidelity of dots from negative to plate... use nothing but the best — arc lamps teamed with "National" High Intensity carbon arcs.

"National" and "Union Carbide" are registered trade-marks for products of

NATIONAL CARBON COMPANY
Division of Union Carbide Corporation . 270 Park Avenue, New York 17, New York
IN CANADA: Union Carbide Canada Limited, Toronto

UNION CARBIDE

He also showed lights which are used to tenderize meat, purify air, destroy odors, and affect skin complexion. He finished the presentation by showing the effect of "black light" on flourescent powder, a demonstration which involved members of the audience.

A "Millionaire's Party" will be held by the club on Nov. 12 at St. Clair Yacht Club.

The November meeting will include a film presented by Eastman Kodak Co.

Kansas City

KC Club Gets Charter

A "Troubleshooting Clinic," which concentrated on presensitized plates and basic everyday problems which occur in the plateroom and pressroom, was a feature of the charter meeting of the Kansas City Litho Club, in September. About 102 persons attended the dinner meeting.

Rae H. Goss, Chicago, president of the National Association of Litho Clubs, presented the charter to the local club.

Herve W. Surrey, Jr., and Allen Lilja were presented silver pins in recognition of their efforts in organizing the new club.

The clinic was conducted by Robert Goetz, a representative of Lithoplate, Inc.

Cleveland

Study Photo Composition

Under the leadership of Howard N. King, a consultant to the Harris-Intertype Corp., Cleveland, the members of the Baltimore Litho Club studied the "Impact of Photo Composition at its September meeting.

Mr. King, who is a well-known typographer, book designer and writer and lecturer on the effective use of type, passed out illustrations of photo composition to the audience. In his talk he emphasized the proven sharpness and the ready variety of size available through the use of photo composition.

New members of the club are O. Jack Polum, Knight Press and James H. Wilkerson, Photo Litho Plate Graining Co.

Philadelphia

Cover Color Trapping

Frank D. Corcoran, Haynes Lithograph Co., Rockville, Md., who has had extensive experience in the field of color printing, examined the problems of high volume color work, with particular emphasis on color sequence and trapping, at the Oct. 24 meeting of the Philadelphia Litho Club.

Mr. Corcoran, who has been pressroom superintendent with Haynes for 15 years, pointed out the practical solutions which are used in his plant for the numerous problems of four-color printing on both sheet fed and web fed presses. His company is a leading producer of four-color covers for paper-bound editions of popular books. Aside from his experience with Haynes, Mr. Corcoran has been with the Army Map Service and Gugler Lithograph Co., Milwaukee. He is a former president of the Washington Litho Club.

New members of the club are William F. Quinn, Johnson & Prince Co.; Parmer Scott, William F. Fell Co., and John J. Meehla, Curtis Publishing Co.

The annual election of new officers will be held at the next meeting on Nov. 28.

•

More on Quality Central

One of the problems of a litho quality control program is that the craftsmen sometimes tend to be over conscientious—they try to control the offset press to a finer degree than is practical.

Russell K. Johnson brought out this point in a discussion of quality control at the Sept. 26 meeting of the Philadelphia Litho Club. "We used to find that our pressemn were constantly making ink adjustments, stopping and starting the press to control the printed sheet to a very close tolerance," Mr. Johnson remarked. The president of the Philadelphia club, who is assistant plant superintendent of the Philadelphia Printing Division of duPont, explained that such extreme control is neither possible nor necessary.

The goal of any quality control system, according to the speaker, "is to do away with inspection, thus saving the cost of the program. You can't inspect quality into a job; quality has to be built in right from the start." Mr. Johnson cited one case to show that quality control can actually save money. "On runs of letterheads it formerly cost duPont 48 cents a thousand to inspect. With a quality control program costing 24 cents a thousand, no inspecion is necessary." Furthermore, he declared, "money comes back in the form of customer contentment with the job."

In basic terms, quality control involves "sampling what you are doing, measuring it, and correcting it."

He suggested these quality control steps:

1. Determine a "target of color" that is reproducible on the equipment in your plant.

2. Use measuring devices, such as a search head densitometer, to measure across the sheet as well as from sheet to sheet.

3. Narrow down the variation. Inform the people in your plant how the quality control program works and what it will accomplish.

4. Educate your customers. Explain to them that your Q. C. program will enable you to supply a job, 98 per cent of which will be in the approved range of variation.

5. Set up a Q.C. department to check on raw materials such as paper and ink. Tell your suppliers what you expect and why.

Mr.Johnson used slides to illustrate his various points. He showed a wide variety of charts and forms which his shop used to keep track of variations during the press run, fidelity of colors, etc.

He suggested that better and quicker instruments, to enable the Q.C. people to "get back to the press with

(*Turn To Page* 130)

how
to
get

sox appeal

Stylish appearance is the heart of fashion advertising. And this fashion magazine insert effectively captures both the soft, luxurious texture of the Adler Company's woolen "shrink controlled" sox and the fresh good looks of the youngsters who wear them.

To get the rich, subdued effect desired, the lithographer wisely chose West Virginia's Clear Spring Offset. Clear Spring is an attractive blue-white paper specifically designed for quality offset production at moderate cost. Like all Westvaco offset papers, it's stabilized for finer multicolor register.

The West Virginia family of fine papers offers outstanding quality and economy for every job, plus the unique benefits of West Virginia's policy of direct sales and service. For full details write West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N. Y.

YOU BELONG... IN ADLERS

Meanwhile back in the classroom the SC* is the world's most popular wool anklet for girls. It's unconditionally guaranteed not to shrink, comes in white and 12 other fashion colors. Just $1 at fine stores everywhere or write: The Adler Company, Box 80, Cincinnati 14, Ohio.

*Shrink Controlled

The Adler Company inserts were lithographed on West Virginia's 60# basis Clear Spring Offset by Strobridge Lithographing Company, Cincinnati, Ohio. They were run on a 5-color Miehle 52 x 76 offset press.

This insert is lithographed on Clear Spring Offset blue-white, regular finish, 100# basis

FINE PAPERS DIVISION
COMMERICAL PRINTING PAPER SALES

CHICAGO 1 ■ *FR 2-7620*
CINCINNATI 12 ■ *RE 1-6350*
DETROIT 35 ■ *DI 1-5522*
NEW YORK 17 ■ *MU 6-8400*
PHILADELPHIA 7 ■ *LO 8-3680*
PITTSBURGH 19 ■ *CO 1-6660*
SAN FRANCISCO 5 ■ *GA 1-5104*

West Virginia Pulp and Paper

A legend comes to life on latex coated paper

March 1, 1942. An icy ski slope in northern Michigan. The eyes of 20,000 fans turn toward youthful Torger Tokle. He already holds the American ski-jump record for distance. On his first jump at today's meet, he sets a new local record for Iron Mountain. On his second jump, Torger faces double danger: a cracked ski and the need to jump onto flat ground, *beyond* the usual landing incline. Down the chute at 70 miles per hour . . . then the take-off into flight. Farther than any skier in the Western Hemisphere had ever jumped, Torger deftly soars . . . to a record leap of 289 feet! Courage and determination to achieve better performance made Torger Tokle a great American skier. And better performance makes Dow Latex 630 an outstanding material for use in coating printing papers. For reasons why, turn the page.

DOW

LATEX COATED

Performance counts . . .
in sports and in printing

An immigrant from Norway, skier Torger Tokle won 42 of 48 meets in the United States . . . *always* turning in the longest jump. World War II kept him from international sports competition. But in combat, before enemy fire claimed his life, the 25-year-old ski trooper continued to deliver courageous performance.

For printing paper performance that assures clean, sharp reproduction—like the colorful painting of Torger Tokle—look to coatings made with new Dow Latex 630. These coatings make possible remarkable paper uniformity . . . a direct result of Dow Latex 630's excellent mechanical stability, superior pick resistance and excellent starch compatibility.

For more information about coated papers made with Dow Latex 630—offset or letterpress, gloss or dull—check your paper supplier or write THE DOW CHEMICAL COMPANY, Midland, Michigan, Coatings Sales Department 1937.

DOW

This four-color, 150-line screen reproduction is printed on 100-lb. offset enamel.

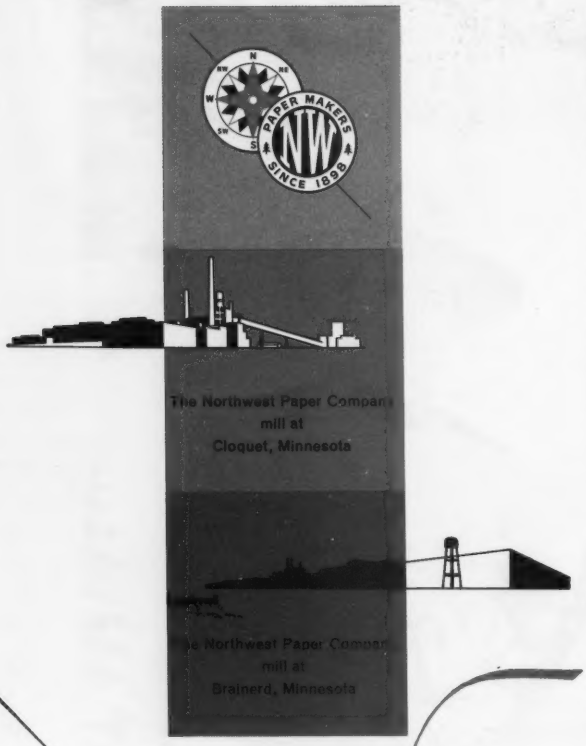
THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

Northwest pedigreed papers

ALWAYS MAKE GOOD PRINTING BETTER

PAPER MAKERS NW SINCE 1898

THE NORTHWEST PAPER COMPANY CLOQUET, MINNESOTA MILLS AT CLOQUET AND BRAINERD, MINNESOTA



NORTHWEST PEDIGREED PAPERS

PRINTING AND WRITING PAPERS

Carlton Bond
Carlton Duplicator
Carlton Ledger
Carlton Mimeograph
Map Bond
Mountie Book
Mountie E. F. Label
Mountie E. F. Litho Label
Mountie Eggshell Book
Mountie Offset:
- Regular
- Antique Wove
- Embossed

Mountie Text
Non-Fading Poster
North Star Offset
North Star Writing
Northwest Bond
Northwest Duplicator
Northwest Index Bristol
Northwest Ledger
Northwest Mimeo Bond
Northwest Post Card
Northwest Velopaque Cover:
- Regular
- Embossed

Northwest Velopaque Text:
- Regular
- Embossed

Wonderwhite Cover
- Regular
- Embossed

Wonderwhite Text:
- Regular
- Embossed

ENVELOPE PAPERS

Carlton
Mountie
Nortex Buff
Nortex Gray
Nortex Ivory
Nortex White
Northwest

OTHER CONVERTING PAPERS

Adding Machine
Coating Raw Stock
Drawing
Gumming
Lining
Papeteries
Register
Tablet

The Northwest Paper Company

CLOQUET, MINNESOTA

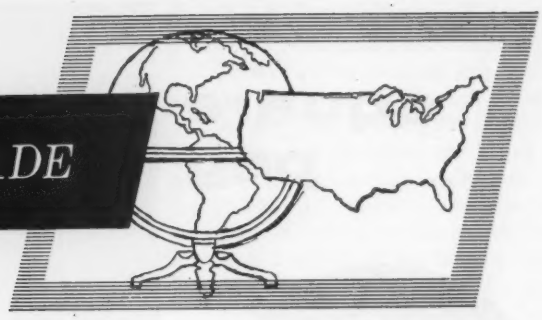
MILLS AT CLOQUET AND BRAINERD, MINNESOTA

SALES OFFICES

Chicago 6, 20 North Wacker Drive • St. Louis 3, Shell Building
Minneapolis 2, Foshay Tower • New York 17, 420 Lexington Avenue

Lithographed upon Regular **MOUNTIE OFFSET** *25 x 38—80 Pound Basis.*

NEWS about the TRADE



Inland Elects Armitage Pres.

Directors of Inland-Magill Weinsheimer Corp., Chicago, have elected James S. Armitage as president. He

James S. Armitage

succeeds to the post held by Carl E. Dunnagan since the merger, on Aug. 1, 1959, of Inland Press and the Magill-Weinsheimer Co. Mr. Dunnagan has assumed the duties of vice chairman of the board and will continue as treasurer of the I-M W Corp.

Carl E. White, vice president, was named general manager of the downtown Inland plant at 600 W. Van Buren St., where Mr. Armitage had served as general manager since the merger last year.

Mr. Armitage has transferred to the corporation's executive offices at 4545 W. Touhy Ave.

A recent addition to the web offset facilities of Inland-Magill Weinsheimer, it was also announced, is a four-color perfecting ATF Webendorfer press.

•

Rand Avery-Gordon Taylor Sold

Rand Avery—Gordon Taylor, Boston lithographic firm, was purchased late in October by the Libbie Printing Co., 465 Cambridge St., Alston, Mass.

Libbie, folding box manufacturer, said that the purchase was made to provide multi-color offset facilities for box manufacture. The company pointed out that the growing use of multi-color offset in box making made the move necessary.

According to a Libbie official, it has not as yet been decided exactly how the Rand Avery facilities will be utilized. However, the offset company's key personnel will be retained.

•

Soman Retires From Brett

Alfred Soman, sales manager of Brett Lithographing Co., Long Island City, N. Y., for eight years, retired from the company on Oct. 15.

Prior to joining Brett, Mr. Soman had been with the sales department of Western Printing and Lithographing Co. He had been in the Lithographic industry since starting with American Lithographing Co. in 1920.

Mr. Soman reportedly has no plans for any future activities in lithography. He is planning an extensive trip to Mexico in the near future.

•

Universal Adds Three Presses

Universal Printing Co., St. Louis, recently acquired a large 77″ four-color offset press and two two-color presses when the company acquired the assets of a large Chicago lithographer.

The company now has 18 offset presses and is said to be one of America's largest offset plants. The complete facilities, including art, platemaking, typesetting and bindery, all under one roof, operate around the clock.

Samuel Langsdorf is president of the company which has printing facilities in its new plant at 1701 Macklind Ave. and its direct mail division at 3848 Market St.

Hogan-Kaus Moves Plant

The Hogan-Kaus Lithograph Co., San Francisco, is moving to a 17,000-square-foot one-story plant at 385 Fremont Street in November. At the same time it is adding a 54″ Harris Press and a Monotype photo-composing machine. Established in 1957 by Frank P. Hogan and Jack S. Kaus, the company specializes in advertising work.

•

Grit Buys Web Offset Press

Grit Publishing Co., Williamsport, Pa., has signed a contract with R. Hoe and Co. for a new 72 page web-offset press. The press is a four-color perfecting unit.

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Copuzelo Joins A. D. Weiss

John Copuzelo has joined the A. D. Weiss Lithograph Co., Miami, as vice president, sales and public relations. He had been president and general manager of Publishers Press, Inc., an affiliate of Rose Printing Co., Miami.

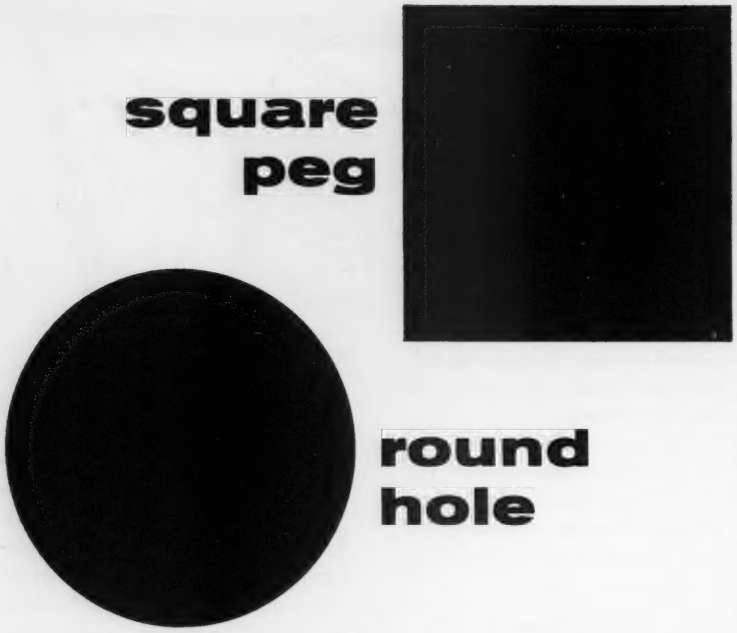
Mr. Copuzelo is vice president of the Printing Industry of Greater Miami.

•

Century Expand Facilities

Century Business Forms, Inc., San Francisco manufacturer of custom business forms for the trade, has launched a quarter-million-dollar expansion program. A new ATF five-color business forms web-fed lithography press has been installed, and the plant has been enlarged.

Carl E. Giblin has been named general manager of the company.



You can't sell transistors to a short-order cook . . . a carload of frozen strawberries to a jewelry jobber, nor lithographic supplies and equipment to those not in the litho field.

And you don't have to waste advertising dollars trying to fit square pegs into round holes, either — not when the business publication in which you advertise is a member of the Audit Bureau of Circulations*.

If it is the lithographic market that you want to reach with your advertising message, — and if the supplies and services you sell are bought by the lithographer rather than other types of printers, — *demand proof* that the magazine which carries your advertising is actually covering this market in depth.

The phrase "Member of ABC" should be significant to every advertiser in business publications. MODERN LITHOGRAPHY is proud to be a member of ABC. Our circulation report, audited by ABC, provides every advertiser with the facts on our coverage of the lithographic industry . . . who and how many . . . and guarantees that if your advertising message is addressed to *lithographers,* that is the group you will reach.

MODERN LITHOGRAPHY

* Through the reports issued by the Audit Bureau of Circulations, this publication, along with other publisher members of ABC, voluntarily and regularly give the buyers of advertising more verified factual information than is available for any other advertising media at any time.

LPNA Extends Convention

The Lithographers and Printers National Association has extended the dates for its 56th annual convention which will be held at the Arizona-Biltmore Hotel in Phoenix. The new dates for the convention are from April 30 to May 5.

The purpose of the extension, according to the association, is to allow members more time to take part in the activities of the convention and to transact business.

The first two days of the convention, April 30 and May 1, will be devoted to meetings of the Label Manufacturers Division.

The opening session for the general membership will be held on May 2, providing four days for the general and panel sessions and products groups to transact business.

•

Williams Joins Rossotti

Rossotti Lithograph Corp., North Bergen, N.J., has appointed Ernest Williams to be general sales manager.

Mr. Williams, whose experience covers 15 years in packaging sales, had been western regional sales manager for Metal Edge Industries, Inc., before joining Rossotti.

He has written a number of papers on sales and selling procedures.

•

Mistik Elects Leander

Robert J. Leander, president of Chicago Show Printing Co., has been elected president of the affiliated Mystik Adhesive Products, Inc., manufacturers of pressure sensitive tapes and other adhesive specialties. Both firms were founded by Russell J. Leander, father and predecessor in both firms of the present president.

•

Craftsmen Award Scholarship

C. R. Wolever, chairman of the scholarship committee of the Anthracite Club of Printing House Craftsmen, Scranton, Pa., has announced the award of a $300 scholarship to Chas. Mulligan, Clark's Summit, Pa.

Mr. Mulligan, the first recipient of the award, is a third-year student at Rochester Institute of Technology, majoring in printing production management.

Peninsula Lithograph Co. Moves to New Site in Menlo Park, Calif.

Peninsula Lithograph Co. has moved to a new 20,000-square-foot building at Menlo Park, Cal., just to the south of Redwood City where it was established fourteen years ago. The firm, headed by Arthur Inman, president, and Herbert L. Britton, vice president in charge of production, has grown steadily from a small operation to a well-rounded plant that is essentially self-contained for all operations except typesetting. Its work ranges from advertising material and technical manuals for the San Francisco Peninsula's electronics industry to internal and trade publications and books for educational and general distribution. A separate allied organization, Pacific Coast Publishers, issues paperback educational books for national distribution, lithographed and bound by Peninsula Lithograph.

The firm now operates six single-color offset presses ranging in size from a Harris 35 x 45" to a Little Chief, and a two-color Harris 22 x 35" that will soon be augmented by another similar unit. It has, since its inception, had its own camera and platemaking department. In addition, the first integrated bindery in Northern California for medium-run paperback books has been installed in the new plant. This includes a fifteen-station Ehlermann gathering machine; a Sulby Bindmaster Model 88, for perfect binding and applying paper covers; and an Atlas three-knife trimmer.

Self-Advertising Awards

The Warner P. Simpson Co., Columbus, O., won first place in both the individual specimen and campaign divisions of the 1960 PIA Self-Advertising Awards Competition, it was announced Oct. 27 at the annual awards banquet at the PIA convention in Washington.

The contest entries were divided, as usual, into three classes, based on the size of the printing plant. The classes are—small shops (1 to 19 employes), medium (20 to 100) and large (100 or more).

Warner P. Simpson Co. won its awards in the large shop class.

In the small shop division, Interstate Printing Co., Houston, Texas, won first place and Charles L. Conlan Printers and Lithographers, San Francisco, won a special honorable mention for individual specimen entry. Those in the small shop division with the best campaigns were The Sheriffs Advertising Lithographing Co., Claremont, Cal., first place, and Hogan-Kaus Lithograph Co., San Francisco, special honorable mention.

Individual specimen winner in the medium shop division was A. H. Pugh Printing Co. and Lithocolor, Inc., Cincinnati. The shop with the best campaign in the medium division was Hub Offset Co., Boston, while Drake Press, Philadelphia, won special honorable mention.

Special honorable mention among large shops went to McCormick-Armstrong Co., Wichita, Kansas. William G. Johnston Co., Pittsburgh, won second prize for its campaign in this division.

(Complete list of all honorable mention and "Best Fifty" awards, along with photos, will be published in the December issue of ML.)

Miller Printing Machinery Co., Pittsburgh, is co-sponsor of the competition.

R & E Council Meeting Dates

The Research and Engineering Council of the Graphic Arts, which has moved its headquarters to 1411 K St., N.W., Washington, D. C., has announced the dates and places of its next two annual conferences.

The 11th annual conferences will be held May 22 to 24, at the Hotel Fort Des Moines, Des Moines, Iowa. The 12th annual conference will be held June 4 to 6, 1962, at the Sheraton Park Hotel, Washington, D. C.

•

Olsen Bros. Close in S.F.

Olsen Brothers Lithograph Co., San Francisco, is ceasing business. Louis J. Drago, who with the late Joseph and Gustav Olsen established the firm in 1928, has been named special label division representative for A. Carlisle & Co., San Francisco.

•

Heberle Retires From Hennegan

Clifford Heberle, who has been employed by The Hennegan Co.,

Clifford Heberle

Cincinnati, Ohio, for 31 years as lithographic pressroom foreman, has retired.

Mr. Heberle was one of the organizers, in 1945, of the Cincinnati Litho Club, which obtained its charter the following year with him as the first president. He also assisted in formation of the National Association of Litho Clubs in 1946, at which time he was elected second vice president. During recent years, he has continued as an active member of the Cincinnati club and has served as chairman of numerous committees.

Mr. Heberle said he will spend his time hereafter golfing, fishing and hunting.

He has been succeeded as lithographic pressroom foreman at The Hennegan Co. by Charles Newberry, who has been night foreman for many years.

Soderstrom Addresses MLA

At the Oct. 20 meeting of the Metropolitan Lithographers Association, Walter Soderstrom, executive vice president of the National Association of Photo-Lithographers, reviewed the many new pieces of equipment exhibited at the association's annual convention held Oct. 5-8 in Chicago.

Mr. Soderstrom pointed out that while new equipment and processes are essential to the continued growth of the industry, the individual lithographer should plan carefully before making any sizeable investment. Simply buying new things is not enough to insure profit or growth, he said.

"Frankly," said Mr. Soderstrom, "I would not buy every new thing that came on the market. Much of the profit made in many a firm goes down the drain because somebody has bought a pig in a poke.

"Lithographers should have economic justification for adding new equipment. This should be more than a wish or a hope, it should be based on sufficient productivity to keep the equipment operating at a profitable level all the time; an assurance that the type of jobs for which the equipment is purchased will continue; and evidence that the equipment will actually lower cost or increase production.

As a final point, Mr. Soderstrom pointed out the value, before buying, of consulting the personnel in a plant who will actually run the equipment to ascertain whether they will be able to use it efficiently.

A new association devoted to the operational and management problems and methods of the medium and smaller litho shops in the New York metropolitan area is being formed with the cooperation of the Metropolitan Lithographers Association. Membership will be open to both union and non-union shops, and to all firms regardless of size. The new group will be named the New York Lithographers Association.

Arrangements have already been made by the new group to use MLA staff services, publications and bulletins, except those relating to labor and contract matters.

The initial meeting for organizing the New York Lithographers Assn. will be held Nov. 10 at the Hotel Shelbourne, 37 and Lexington Ave., 6:15 p.m.

The dinner meeting will be devoted to a panel on "Cost-Traps in Litho Operations," moderated by Albert Gerson, Gerson Offset. Serving on the panel with Mr. Gerson will be: Robert Gold, James Gray, Inc.; Daniel Ford, S & S Lithographers; Michael Martocci, Empire Color Litho, and Bernard Schreier, Chelsea Litho.

Plant owners interested may contact Henry G. Latimer, executive director of MLA, 33 West 42nd St., New York.

•

Hommel Leaves Lanston

Theodore Hommel has resigned as general sales manager of Lanston industries and vice-president of Unitronics, Inc., to become president of Theo. Hommel, Inc.

The new corporation specializes in the development of control devices and processes for the graphic arts.

•

Spray Mfrs. State Position

Twenty-three leading producers of non-offset spray products used in the printing industry last month issued a joint statement to clarify the status of their products under federal legislation governing food additives.

Issued by the Graphic Arts Spray Manufacturers, a national organization affiliated with the New York Employing Printers Association, the statement asserts that non-offset sprays are not offered or represented as "food additives," but that members of the group can supply products composed entirely of ingredients on the "white list" (approved) of the Food and Drug Administration.

Printers of food packages and labels have been concerned since March with the impact of the Food Additives Amendment to the Federal Food, Drug and Cosmetic Act, which went into effect at that time. The amendment places restrictions on certain materials which may become components of food during packaging and processing operations.

The firms which joined in the statement produce 85 per cent of the non-offset spray powder and liquid used in printing pressrooms in the United States. Their products have been identified for 19 years by yellow "approved labels" evidencing that they have been tested for safety by an independent laboratory. The testing program was established by the New York Employing Printers Association in cooperation with the International Printing Pressmen and Assistants' Union of North America.

•

Buy Goss Web-Offset

Southern Newspapers, Inc., has ordered a new two-unit Goss Suburban web-offset newspaper press to be installed at West Point, Georgia, in the *Valley-Times News*. West Point is located on the Georgia-Alabama border adjacent to Lanette, Alabama. The *Valley-Times News*, a daily paper, serves both communities.

The press is scheduled for installation late this year. It will consist of two floor mounted units with a combination half and quarter page folder. Each unit will print four broad-sheet pages, blanket to blanket on a center fed web. The total capacity of this press arrangement is eight broadsheet, or 16 tabloid pages. The drive ordered for the new press has sufficient capacity to allow for the future addition of two more units.

The unit will be manufactured by the Goss Co. in their Rockford (Ill.) plant.

Lithoplate Advances Dunne

Thomas Dunne was recently appointed general sales manager for the Lithoplate Co., division of Harris-Intertype Corp., Cleveland. He had been eastern sales manager.

Printed Offset on Atlantic Offset, Regular Finish • Basis 80

The house was burning. Women and children trapped. You were doing ninety.

Did you save them?

Easily. *Anything* was possible the day your dad took you to the fire house and you climbed up on that shiny truck. What a proud moment!

It's really no different, is it, when a piece of good printing comes off the press? The halftones sharp. The colors sparkling.

Pride. We share it with you. Because good printing begins with good papers. And that's the only kind we make.

EASTERN E EXCELLENCE IN FINE PAPERS

ATLANTIC FINE PAPERS

EASTERN FINE PAPER AND PULP DIVISION · STANDARD PACKAGING CORPORATION · BANGOR, ME.

Offset printed in four colors on ATLANTIC OFFSET. Regular Finish, basis 80 pounds. Run on 52 x 76 four-color press at 4,000 IPH.

Sharper illustrations with ATLANTIC OFFSET

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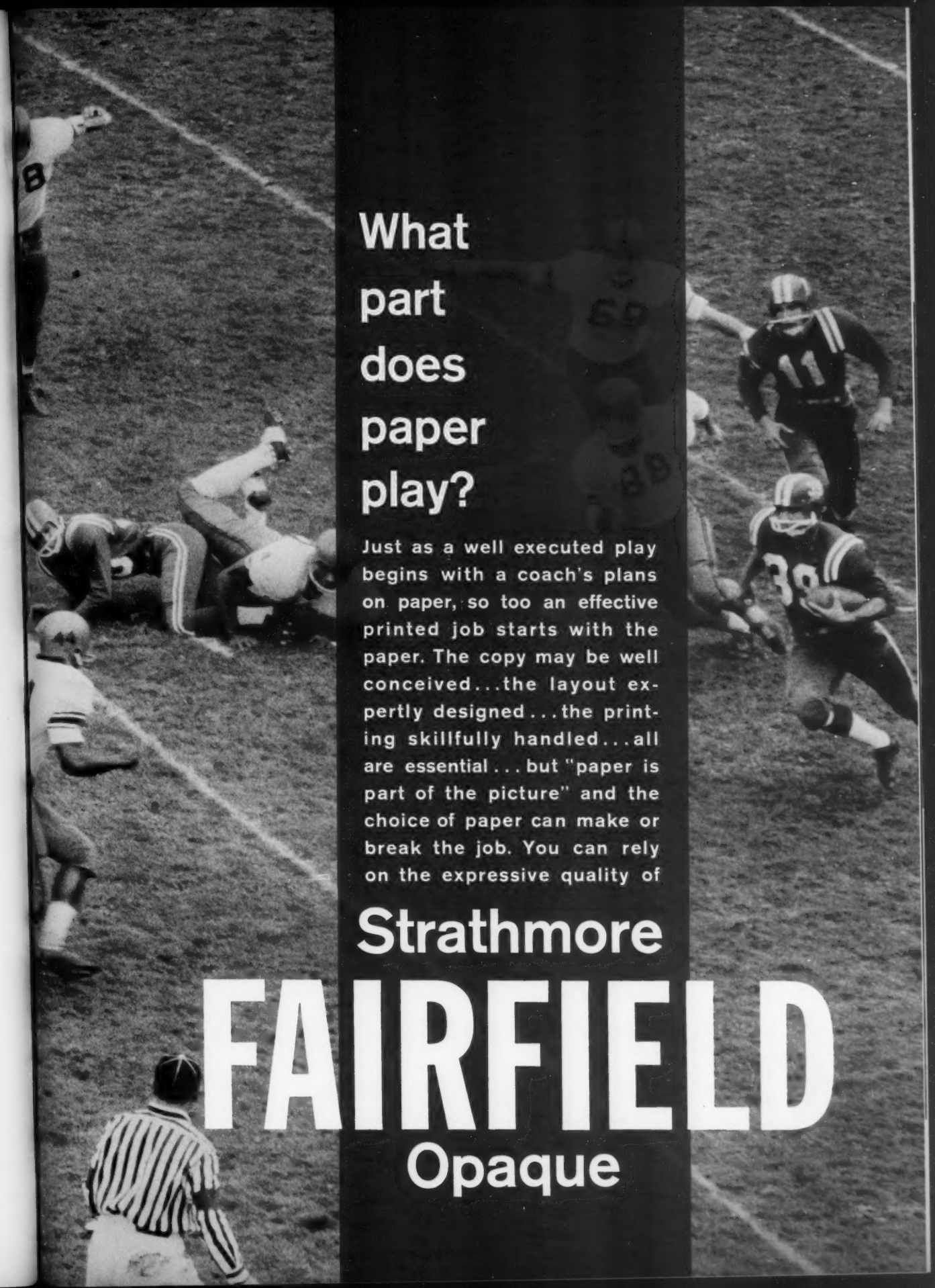

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TODAY new reasons make Strathmore Fairfield Opaque an equally wise choice for the letterpress or offset printer who seeks such quality in a paper with a range of weights in text and cover sizes that meet his day to day needs.

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White — VELLUM

	Text Basis 70	*Text Basis 80*	*Text Basis 90*	*Text Basis 100*	*Text Basis 70 2-sheet*	*Text Basis 70 3-sheet*
23 x 35	118M	136M	152M	170M	236M	354M
23 x 29	98M	112M				
25 x 38	140M	160M				
35 x 45	232M	266M				
38 x 50	280M	320M				

	Cover Basis 50	*Cover Basis 65*	*Cover Basis 80*	*Cover Basis 100*
26 x 40	200M	260M	320M	400M
20 x 26	100M	130M	160M	
23 x 35	155M	201M	248M	
35 x 46	310M	402M	496M	

	Basis 50 (2 sheet)	*Basis 60 (2 sheet)*	*Basis 60 (3 sheet)*
22½ x 28½	200M	240M	360M

PLATER MEDIUM PLATE, CALENDER MEDIUM PLATE

22½ x 28½ 240M

Colors — VELLUM

Larkspur Blue, Heather Blue, Heather White, Flax Blue, Peach, Ivory, Buff, Pink, Green, Lime, Gray, Tan.

	Text Basis 70	*Text Basis 70 (3 sheet)*
23 x 35	118M	354M

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STRATHMORE PAPER COMPANY

West Springfield Massachusetts

Picture courtesy Syracuse University Athletic Department and Herman Borzner, Syracuse POST-STANDARD.
1959 National Collegiate Champions Syracuse University (White Shirts) vs. Holy Cross.

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Labels printed on TROJAN FOIL—like this one—assure you of better results every time. That's because TROJAN's exclusive superior surface smoothness lets you reproduce as many colors as you want, run as many press passes as you need, and print with less ink. TROJAN FOIL will die cut, emboss, score and fold perfectly, and offer fewer registration problems than any foil you've ever used. Try it on your next job—it pays!

A point of interest: When Panelyte switched from paper to foil for its gold foil seal, use of this label by dealers increased 300% in one year!

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Canadian Printers Hit Expanded Gov't Printing

THE CANADIAN government has been told that its National Printing Bureau is following Parkinson's first law, which says that work expands to meet the personnel available.

The contention was made in a brief to acting State Secretary Balcer by the Graphic Arts Industries Association comprising private printers who are complaining of competition from the Queen's printer.

Less than 10 per cent of the bureau's rising output is for Parliament, the brief said. There has been an ever-swelling flood of folders, pamphlets, reports and books turned out for government departments and branches.

The association said much of the current production reflects a build-up simply to justify the newly built printing bureau in Hull, Que.

(The bureau was the subject of an intensive inquiry by the Commons public accounts committee in 1958 to determine how $17 million was spent on the building.)

The association added: "Our conviction is that, in substantial measure, work has expanded to fill the time and space available, and to secure maximum production from new personnel and new machinery."

Although the association's brief didn't say so, this is the gist of the theory expounded by C. Northcote Parkinson, British economics and history professor. His second law is that expenditure rises to meet income.

In 1958-59 the production from the printing bureau was $9,122,714, an increase of 75 per cent in five years, the association said, which averages 15 per cent a year.

During the same period, value of orders placed by the office with private printers declined to $4,531,906 in 1958-59 from $5,965,861 in 1953-1954.

The Graphic Arts group suggested that the higher output from the bureau results from the notion that the Queen's printer's costs are only 70 per cent of commercial prices.

In reality, the association contended, the public is losing money. The bureau's costs did not take into account expenses charged against other government departments, loss of corporation and local taxes, and loss of postage.

A study of the printing bureau operations should be made by the Royal commission on administrative efficiency in the government, headed by J. Grant Glassco of Montreal, the printers said.

•

Hoe Names Lewis VP

R. Hoe and Co., New York, has named Richard E. Lewis to the post of vice president-sales manager. Mr. Lewis had been the director of the mechanical and service division of American Newspaper Publishers Association Research Institute.

•

YLA Discusses Marketing

The Young Lithographers Association, New York, opened the 1960-61 meeting season with a discussion of the position of the graphic arts in the present and future of marketing, led by William Clark, vice president in charge of advertising for Owens Corning Fiberglas Corp.

Mr. Clark began his presentation with a slide film of the marketing approach followed by his company, indicating the importance of the graphic arts in it.

He said that, while the printing industry plays an important role in present marketing schemes, this should be increased in the future. The individual printer should begin now, he said, to take an active part in the creative role of marketing. A printer should not merely wait for the idea to be passed on to him for production, but should take the initiative and be a prime creator of ideas.

In line with this recommendation, Mr. Clark pointed out several factors which will be of increasing importance in the future of marketing.

The importance of the idea of corporate identity will continue to grow, he said, and the printer should slant any proposed advertising in that direction. There are a number of smaller companies that have not as yet begun to rely on the corporate identity theme in their advertising. To them the printer can perform a real service in his suggestions for advertising pieces.

The increased importance of point-of-purchase advertising in the market place is steadily growing, Mr. Clark reminded, and the alert printer will take real advantage of this growth if he concentrates on developing effective ideas in this area.

Finally, the idea of planned obsolescence in new product design necessitates that the product be exploited quickly and effectively. This makes new ideas in packaging a vital point in any program of marketing. Any packaging printer who intends to take advantage of future growth must therefore be prepared to create new packaging ideas in pace with this rapid change.

The November meeting of the association will feature a program on color separation.

•

Refutes School Misuse Charge

An ex-teacher's charges that technical school printing shops in Toronto, Canada, are misused have been answered by J. R. H. Morgan, superintendent of secondary schools.

In a report to the advisory vocational committee of the Toronto board of education, Mr. Morgan said schools follow provincial regulations and cooperate with unions.

"With respect to the statement that live production work interferes with teaching, only one of eight printing teachers reported any interference," Mr. Morgan said.

George Hendry resigned from Central Technical School last May because of "exploitation of teachers, victimization of students and shameful waste of public funds."

He said students' time was being wasted while their teachers printed forms. The Toronto Allied Printing Trades Council asked for an investigation.

The committee has deferred discussion of the report until copies have been studied by union officials.

Thomas Osborne, printing trades council secretary, said the union had not decided what action to take.

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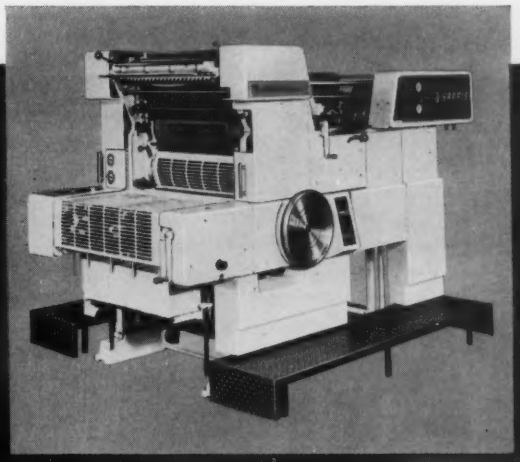
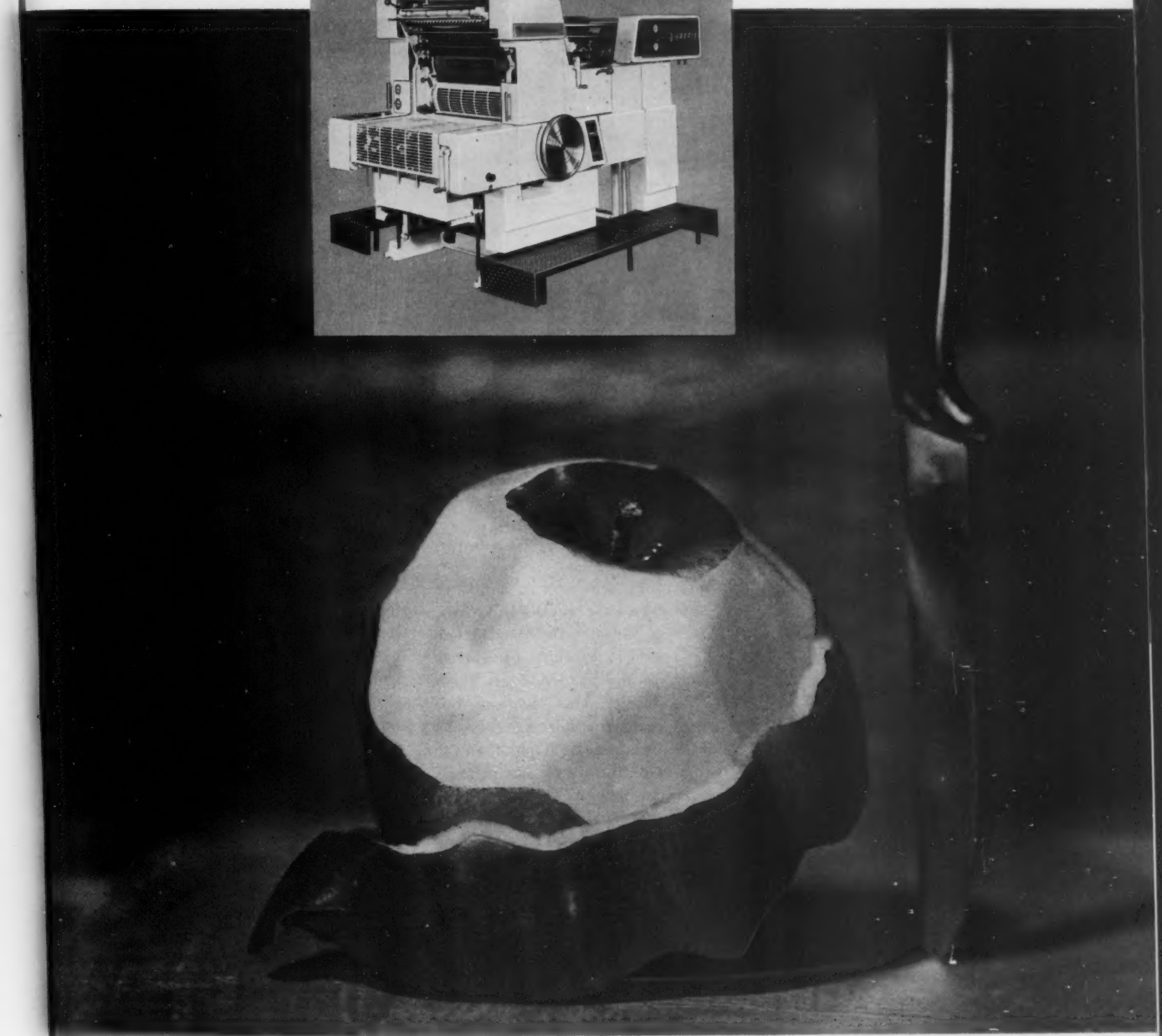
You can "bite" off a wider range of jobs—and run them more profitably—on a Harris 23 x 29" single color. Its high productivity, plus low operating costs, keep your profits healthy on each and every job. It features fast set-up and getaway, as well as easy, trouble-free operation. It handles 8½ x 11" bleed work, six up, with speeds of 8,000 iph. Simplified center separation, pull or push guides, feed rolls and the Harris multi-roll inker design, plus many other "big press" features, are reasons why a man does his best work on a Harris. Write for the new Harris Model 129 booklet.





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Report Canadian Printing Profits Are Up

PROFITS are rising in Canada's printing industry, according to a report made to the annual convention of the Graphic Arts Industries Association held at Winnipeg recently.

Donald Sommer, secretary of the master printers section, Printing Industry of America Inc., made the prediction which was based on a survey of 50 Canadian plants.

He pointed out that the industry was able to report, for the first time in 12 years, that the downward trend in printing profits appears to have been checked.

However, even though there was a profit increase last year there are warnings, said Mr. Sommer, that the margin was less than it should be for safe operation in relation to volume of sales.

The convention theme was "Management Under New Pressures," and speakers dealt with such subjects as rising costs, demands on management skills, employe relations, foreign competition, and technological changes.

George Laverdure, industrial relations consultant, and labor negotiator for the Montreal printing industry, pin-pointed labor contract clauses which should be added, amended, rejected or changed in printing industry contracts.

There are often local reasons, he said, which force employers to accept certain clauses which don't exist elsewhere. There are special circumstances which could burden an employer against his will with conditions neither side really wants.

In many contracts, he said, there has been unfortunate neglect of the "management rights clause." It doesn't even appear in most contracts and, when it does, it is nearly always weak and practically canceled out by concessions to the union in subsequent paragraphs.

It is often taken for granted that management represents owners of the enterprise. Being responsible for directing its operations, it is assumed that it has the rights normally derived from these functions. The result is that unions have gradually invaded the exclusive field of management and have met with little resistance in the process.

Other key speakers were: Kenneth J. Farthing, general advertising manager, Canadian Westinghouse Co.; D. Harry Young, prairie division manager, Canadian Manufacturers Association; Hyman Safran, Safran Printing Co., Detroit; Marsh Jeanneret, director, University of Toronto Press.

G. S. N. Gostling, Niagara Falls, Ont., was reelected president, while the vice presidents who were elected are: Pierre Begin, Montreal; T. A. Comfort, Edmonton; W. D. Hurley, Brantford; C. C. Hyatt, Vancouver; Georges Laflamme, Quebec; G. H. Love, Toronto; J. T. McLellan, Winnipeg.

•

Enroll 65 in MVLA Course

Sixty-five new students have been enrolled this year in the three-year course sponsored by the Miami Valley Lithographers Association at the Ohio Mechanics Institute in Cincinnati.

Instruction material is provided by the Lithographic Technical Foundation, and the necessary equipment, such as one, two and three-color presses is made available by Miami Valley association members, a number of whom serve as instructors.

Thomas E. Brinkman, vice president, Cincinnati Lithographing Co., Inc., is chairman of the association educational committee.

"Navigators" Examine Money Saving Ideas

THE Navigators, New York graphic arts group, opened their 1960-61 season in September with a study session on ideas for working within a budget. The session was held after a brief review of the history of the association by past president Stanley Walkwitz, Publishers Printing-Roger Kellog.

Adolph Hendler, Stella L. Drattler Advertising Agency, led the first study group session with a talk on "Money Saving Ideas — Working Within a Budget." Mr. Hendler told of a problem recently confronted, which was how to produce six 8½ x 11", two-color, one side, all line work, promotion pieces within a specified budget. Each piece was to be printed black with color bands across the top and bottom of the piece, to be in different colors.

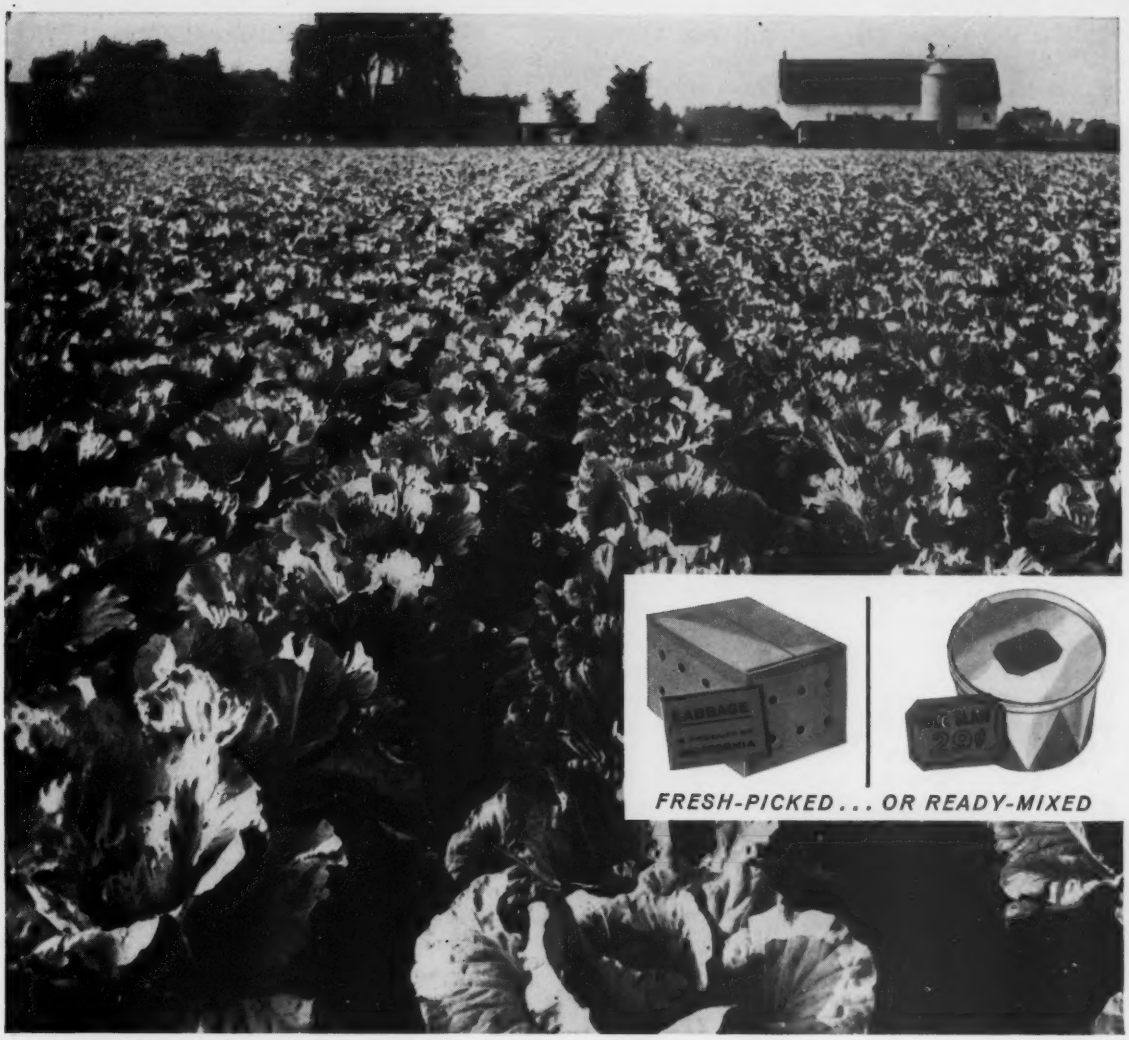
The job was laid out for a single color 20 x 30 offset press to be printed one up of each lot, on a single sheet. Only two plates were used, he said, with the sheet going through the press four times.

One plate was used for the black, the other for color variations which were achieved with process colors. A single color plate was utilized for all three runs by cutting the packing away from the areas not requiring a particular color. While the pressman was running one color he prepared the packing for the next color.

Mr. Hendler said the key to the problem was in preparing a layout sheet showing in what order the colors should be run, and how the packing should be cut for each color.

Leo Pine of Abco Press spoke of the different practical effects that can be achieved with printing inks, such as using a metallic white when printing on a dark stock, so that it will not fade.

Mr. Pine told of a cover job he had which required a blind score and perforation in both directions with a three line imprint in black ink. The printing consisted of small quantities of many different imprints. He was able, he said, to do the complete job with one press impression, by making up a separate lockup form for the printed imprint within the main lockup consisting of the blind scores and perforations. This made fast imprint changes possible without disturbing the rest of the form. The type was raised about 40/1000's above level of type high, and the ink rollers were raised by the same amount. Thus it was possible to print the imprint, yet keep the scores and perforations blind.



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OLD TAVERN Gold and Platinum Label Papers, Gummed and Ungummed.

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LUDLOPAKE the whiter, brighter, high-opacity label paper.

Also, these Ludlow specialty papers: Old Tavern Gold and Platinum Cover and Box Cover, Super Cover, Relyon Reproduction Paper. Ludlow Papers, Ware, Massachusetts, Dept. 176.

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Your Widest Selection of Printable Label Papers

Veritone Moving to New Plant in Melrose Park

A CONSIDERABLE increase in production of books by offset is expected from the recently announced plans of the Veritone Co., Chicago lithographers, to move to a new plant in Melrose Park, a west side Chicago suburb.

Now under construction, the building, with 60,000 sq. ft. of space, is a cooperative project of Veritone and the Robert O. Law Co., 60 year old book manufacturing firm, which, in 1959 acquired a stock interest in the lithographing company. Complete occupation of the new Melrose Park quarters is expected by next Jan. 1.

Total cost of the project will be $2,000,000 and more than half of this sum has been allocated to purchase of new color presses and other lithographing equipment. Included in this program, will be a new Hess & Barker 4-color book web offset press. Also to be added are two Harris 77″ two- and four-color sheet fed offset presses and two 38″ two-color presses. Veritone will move some of its present equipment from the Chicago location, including a web-fed offset press which has been operated for several years. Another $300,000 will be invested in new bindery and other equipment for the Law Co.'s Chicago plant. The building itself is being erected by a real estate development concern.

Veritone's new 60,000 sq. ft. plant at 2020 Ruby St. in the suburb, is being erected adjoining a 50,000 sq. ft., single story building used by the Law company for storage, cartoning and shipping. Law has a 170,000 sq. ft. letterpress printing plant and bindery at 2100 N. Natches Ave. in Chicago, so that the associated companies will now have a total of 280,000 sq. ft. of space devoted to book manufacture and fine color lithography.

Veritone's offices, camera, stripping and plate making departments will be located in an air conditioned second floor section of the new building and presses will be placed on the ground floor.

The Law Co., operating one of the largest book manufacturing plants in the country, was founded in 1900. Products include more than 15 major encylopedias, sets of case bound books, textbooks and popular editions. The recent rapid growth in use of full color lithography for illustrations in such books and for textbook covers, coupled with high speed web offset for cost reducing printing of the text, induced the firm, after five years study, to acquire an interest in the Veritone Co., through stock purchase.

Veritone was originally founded by a Chicago photoengraving company, Collins Miller & Hutchins, prior to World War II. For some time it was known as the CMH Offset Co. In 1946 the founders withdrew and the firm reorganized as the Veritone Co., with Vernon K. Evans as president.

Mr. Evans is known for his activities in the Lithographers and Printers National Association. Under his leadership the company has enjoyed a rapid sales growth and a reputation has been earned for the high quality lithography produced. This is strongly attested to by the company's record for winning awards for design and quality workmanship in such contests as those sponsored by LPNA, the Society of Typographic Arts and other printers' groups.

In addition to the increased business to be done in production of offset printed books, Mr. Evans said plans are a foot for a considerable expansion in the commercial lithographing business he has built.

•

Bersbach Celebrates 50 Years

Elmer Bersbach, secretary and director of the Manz Corp., Chicago, completed half a century of service in September but declared that he has, as yet, no plans for retirement. Now 72 years old, Mr. Bersbach recalled how, back in 1910, he started as a messenger and "magnesium boy" (they sprinkled magnesium on the cuts) at $10 a week in the photoengraving department of the 94-year-old Chicago offset and gravure printing firm. Ten years later he had worked his way up to secretary and in another six years (1926) he was made a member of the board, both of which positions he still holds.

Added to his long record in the printing business he served for 12 years as an alderman in the Evanston (Ill.) city council and for five years thereafter he was a member of that suburb's zoning board of appeals. He is also a past president of the Evanston Country Club.

There are more jobs available today in the printing field than 50 years ago, Mr. Bersbach said in an interview, but he feels that there are fewer opportunities for advancement in management.

•

Names Polyfibron Sales Force

James T. Keefe Jr. has been appointed sales manager of a newly created general printing products department of the Dewey and Almy Chemical Division, W. R. Grace & Co., Cambridge, Mass.

James T. Keefe, Jr.

Mr. Keefe will be in charge of marketing the company's new Polyfibron offset press blanket (see new product report, page 35) and other products for the printing industry now under development. Introduction of the offset blanket marked the entry of the company into the printing field, and the new department will be responsible for sales and new product development in that industry.

For a year and a half Keefe has been in charge of the development program for the press blanket. He was formerly product manager for the soda lime department.

Richard H. Daily has been appointed New England sales representative for the department.

Robert K. Miller has been named to be sales representative for New

Plan Now For Growth! Miehle Unit Construction Protects Your Investment As Your Business Expands

You expect your business to grow, so why not anticipate future expansion requirements as early as possible. Plan *now* for future needs.

For example, why dispose of a two-color press to buy a five color, when you can save money by simply adding three modern printing units to your present press. Here's where Miehle's true Add-A-Unit Construction really pays off in growth flexibility and long term operating economy.

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New Miehle models are engineered to provide for *your* growth. The new 54/77 and 43/60 units can be added to the hundreds of Miehle 76's and 61's now in the field. The story's the same for both offset and letterpress...and you can even combine both processes in one press!

Others claim this flexibility...but Miehle Unit Construction has been *proved* in plant after plant.

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York, New Jersey and Pennsylvania.

John H. van Keulen has been appointed Midwest sales representative for the company.

•

RIT Plans Color Seminar

A color and color control seminar, sponsored by the Extended Services Division of Rochester Institute of Technology, will be held December 14 to 16, at the Towne House Motor Inn in Rochester.

The seminar, third annual event sponsored by RIT, will provide registrants with an intensive study of practical approaches and sound methods relating to physics of color, instrumentation, color vision, illumination, elements of color, color measurement and purchasing and color specification.

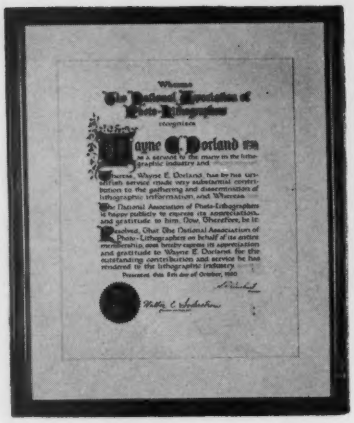
Problems under discussion will be related to the following fields: Commercial printing, packaging, converting, magazine publishing, ink manufacturing, advertising and similar industries and businesses.

The course has been designed for research personnel, package designers, product engineers, sales representatives, quality control engineers, color matchers, artists, foremen, plant managers, and this year has been further supplemented with experience in using color measurement techniques for specification and control for the purchasing personnel of the industry.

Serving on the faculty for the three-day seminar will be: F. L. Wurzburg, Printing Ink Division, Interchemical Corp., and technical adviser of the seminar; Dr. Henry Knoll, head of the lens product development and instrument research, Bausch and Lomb Optical Co.; Dr. Robert Meltzer, head of the advanced development department, Bausch and Lomb Optical Co.; Warren Reese, vice president, Macbeth Daylighting Corp., and Warren L. Rhodes, coordinator of the seminar.

Reservations for the seminar may be made by contacting Harold Kentner, director of Extended Services, Rochester Institute of Technology. The cost of the three-day seminar is $150.

NAPL Honors Wayne Dorland—ML Publisher



Wayne E. Dorland, publisher of MODERN LITHOGRAPHY, was honored by the National Association of Photo-Lithographers at its annual convention last month in Chicago, for his years of service to the industry.

The award, presented by Walter E. Soderstrom, NAPL executive vice president at the Oct. 8 technical session, cites Mr. Dorland for his efforts in behalf of the lithographic industry over the last 25 years, both through his personal activities and through MODERN LITHOGRAPHY.

Also given similar awards were Stanley Rinehart, retiring president of NAPL and W. O. "Toby" Morgan, offset editor of *Graphic Arts Monthly* magazine.

Gegenheimer Changes Name

William Gegenheimer Co., Brooklyn, has changed its name to Baldwin-Gegenheimer Co. The company manufactures Baldwin ink fountain agitators, press washers, water levels, and water stops.

The reason for the name change, according to a company official, is the fact that trade name and company name today are well-known in the graphic arts and are often used interchangeably.

•

GA Survey Courses Started

A Survey of the Graphic Arts, an 18-week course on the many aspects of the industry, sponsored by the Navigators, New York graphic arts association, was recently started.

The course consists mainly of field trips to various graphic arts businesses in the New York area. It is designed for those who wish to gain a better overall understanding of the entire field of graphic communications.

Aside from the trips to shops working in letterpress, lithography and gravure, the course includes trips to plants doing offset plate-making, typography, letterpress engraving, silk screen printing, photogelatin printing, paper-making, and die cutting and finishing.

The course is being coordinated by Malcolm Klien, Weaver Organization, and Syd Rapoport, Syd Rapoport Association, who is chairman and chief instructor.

•

Tobias Expands Lab.

An expanded graphic arts research laboratory serving printers, lithographers, and manufacturers of graphic arts equipment and supplies has been built by Philip E. Tobias Associates in Glenside, Pa.

The work of the laboratory is directed by Philip E. Tobias, formerly director of research and engineering at Edward Stern & Co.

•

Publication Printing Discussed

Joseph Simon, vice president of Anderson, Ritchie and Simon, Los Angeles, discussed "Planning Your Printed Publication," at the Dental Society Executive Secretaries Conference on Oct. 15, in Los Angeles.

Cut Or Trim The Best Way! Flat Cutting...Trimming Lifts...In-Line Trimming...MGD Has The Right Machine

Only MGD offers all four types of cutting and trimming equipment...*completely unbiased*, with no "ax to grind."

LAWSON PACEMAKER CUTTERS—for *flat cutting* accuracy and speed...six models from 40" to 69"... easy operation, maximum safety and minimum maintenance...optional Electronic Spacer and Flexible Contour Clamp. Low cost *Regent Cutters*, also.

DEXTER BRACKETT TRIMMER—for *cutting apart* multiple-up labels, booklets, pads, post cards, etc.... work up to 25" wide moves *straight through* the machine to a built-in conveyor for packing and shipping.

McCAIN 3-KNIFE TRIMMER—couples to stitcher, automatically *trims single books* accurately on all three sides...speeds up to 9000 per hour on sizes to 12 x 19" ...optional 4th and 5th knives for maximum output on two-up work. *39" Front Cut Trimmer, also.*

LAWSON 3-KNIFE RAPID TRIMMER—*trims lifts of books*, magazines or pamphlets on all three sides with exacting precision...lifts to 4¾" high...speeds to 25 lifts per minute...handles all types of bound work, one or two-up...sizes to 11¾ x 16⅞" (trimmed).

Be sure to check with MGD first about all of your cutting and trimming equipment needs.

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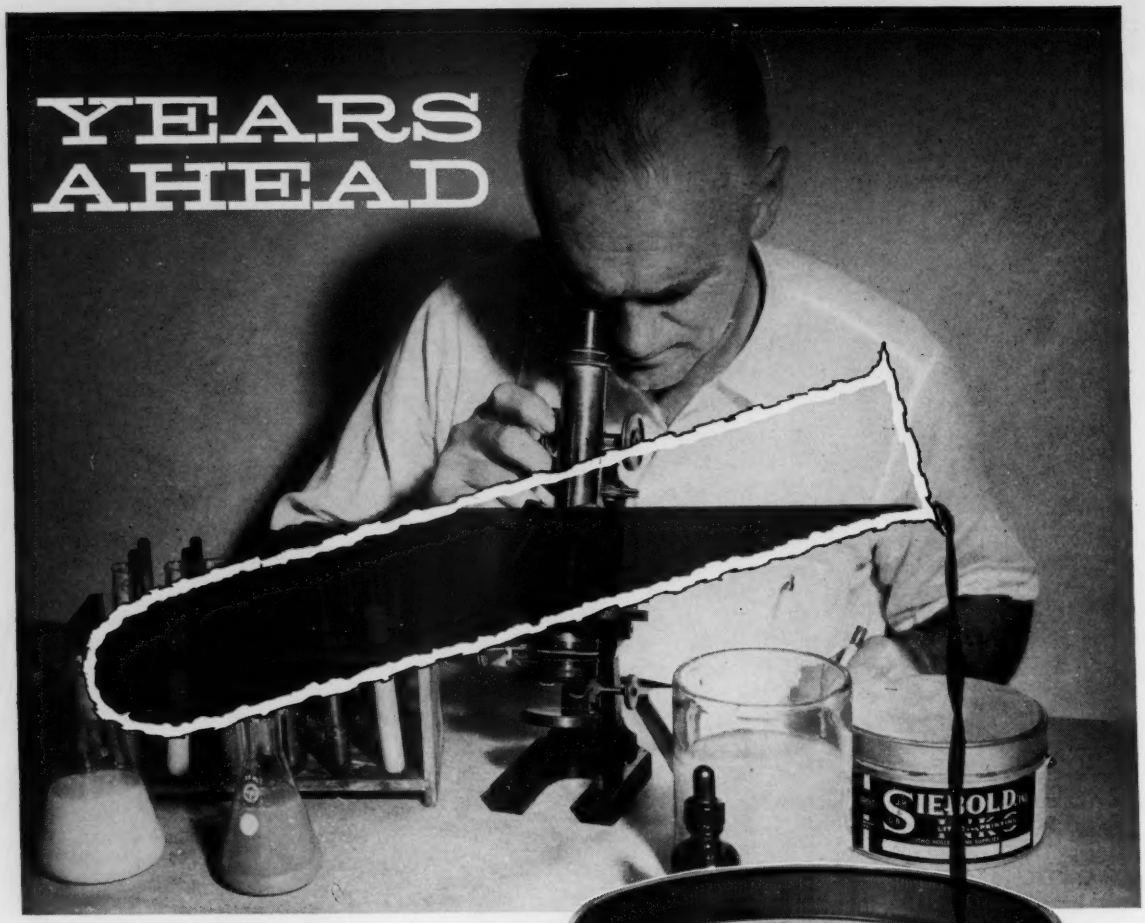

J. H. & G. B. Siebold, Inc. is now able to bring you the latest scientific development in inks! Many years of chemical research have produced, perfected and proved OFFSET ZIPPTONE INKS to be YEARS AHEAD of all other INKS. *Here are some proven statistics:*

1	Press ready
2	Faster setting
3	Excellent for short and long runs
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7	Lengthens plate life
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9	Finer reproductions
10	Quality controlled

"OVER 75 YEARS SERVING THE INDUSTRY"

MEMBER: Lithographic Technical Foundation
National Association of Photo Lithographers
National Association of Printing-Ink Makers
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150 VARICK STREET, NEW YORK 13, N. Y.

EVERYTHING FOR THE LITHOGRAPHER • MANUFACTURERS OF PRINTING, LITHOGRAPHIC INKS AND SUPPLIES

NYEPA Printing Exhibit Planned for Jan. 16-19

Members of Board of Judges for NYEPA Exhibition of Printing.

THE New York Employing Printers Association has received entries from thousands of buyers, designers and producers of printing in the New York metropolitan area, for the 19th Exhibition of Printing.

The exhibition, a feature of Printing Week in New York 1961, will be held in the Hotel Commodore, for four days, Jan. 16-19. Last year's exhibition included almost a thousand specimens.

Entries, produced by any process or combination of processes, will be accepted in all principal classifications of printing uses: advertising printing, books, annual reports, house magazines, instruction and professional manuals, periodicals, stationery, business forms, financial printing, point-of-purchase printing, label and package printing, novelty and specialty printing.

All entries must have been produced since Nov. 1, 1959 by printers or lithographers manufacturing in the metropolitan area.

A twelve-member board of judges will examine each piece which has been submitted and select for hanging the most outstanding sepcimens in each classification. Many pieces will be accompanied by case histories describing unusual features of production.

Members of the board of judges are Melvin Loos, adjunct professor of graphic arts, Columbia University, chairman; O. Alfred Dickman, advertising production manager, *New York Herald Tribune;* H. S. Gorschman, sr. buyer of merchandising aids, Lever Brothers Company; Leo H. Joachim, editor and publisher, *Printing News* and *Productionwise;* Louis Leon, production & traffic manager, Mogul Williams & Saylor Inc.; and Walter H. Liebman III, advertising manager, Liebmann Breweries, Inc.

Also on the committee are: William M. McNeill, division manager of purchases, printing and office equipment, Union Carbide Corp.; Charles V. Morris, executive vice president, Allan & Gray Corp.; Irving F. Nelson, buyer, graphic arts reproductions, National Distillers and Chemical Corp.; Gustave L. Saelens, manager, graphic arts department, American Cynamid Co.; James V. Sbrigata, buyer, paper packaging & advertising materials, toilet articles division, Colgate Palmolive Co.; Edward W. Side, production manager, advertising and sales promotion, CBS Television Network.

•

Henkel Elected V.P.

Johnson & Quinn, Chicago printers and lithographers, has elected Robert L. Henkel as vice president and director. He was formerly vice president and secretary of the Wallace Press in that city.

•

J. C. Dillon Named Chairman

John C. Dillon of the J.C. Dillon Co., New York has been named chairman of the board of that concern. He had been president of the company, which he founded in 1934.

John C. Dillon, III, has replaced his father as president. He has been executive vice president and a director of the firm, which he joined after his return from military service in World War II.

The company, which operates letterpress, lithographic and gravure presses, is reportedly the only three process house in existence.

•

NuArc Holds Plant Tour

Nu Arc Co., Chicago, invited dealers and members of the trade press to tour its recently opened plant and offices in Chicago. The tour, which was attended by 100 dealers and members of the press, was held Oct. 6, in conjunction with the NAPL convention, being held in Chicago at the same time.

The company provided the visitors with transportation from the convention to the plant and back again.

The tour featured a visit to the production facilities of the new plant, providing an opportunity for all to see the most modern approach to graphic arts equipment manufacture.

•

Sexton Moves in KC

The Sexton Printing Co., offset printers, moved to larger quarters at 3001-7 McGee, Kansas City, Mo. A 15,000 square foot building and parking lot were leased from the Newman Fox Co.

Extensive remodeling was done before the move. New, larger equipment will also be installed.

Don E. Sexton is president of the 13 year old company, which has grown from two employes in 1947 to 40 today.

•

ATF Advances Cotton

John G. Cotton has been appointed assistant advertising manager of American Type Founders, Elizabeth, N. J. He was formerly supervisor of direct mail advertising.

Mr. Cotton joined ATF in 1940. Before joining the advertising department, he was assistant manager of estimating.

ILFORD PRESENTS

R·30

TRICHROME PLATE

A SUPERIOR NEW PLATE FOR BALANCED COLOR SEPARATIONS

This new plate is designed to set new standards of color reproduction from all types of originals by producing the most *balanced* set of color separation negatives available. For the discriminating color house where quality is all-important, it offers the following specific advantages:

1. Balanced sets of continuous tone separation negatives for the cyan, magenta, yellow and black printers.

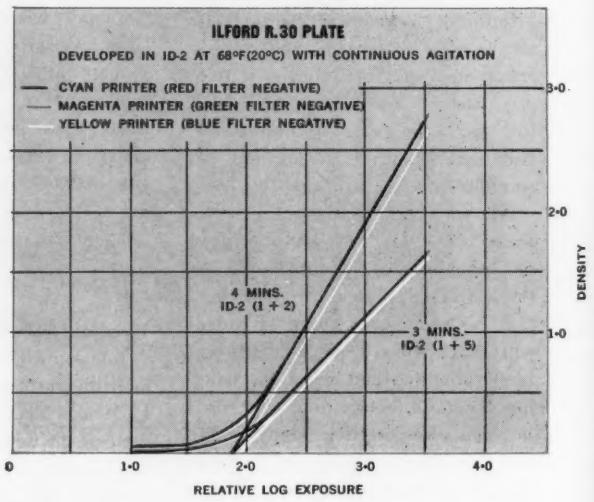
2. Maintenance of this balance throughout a wide range of development times and dilutions. Using the Ilford R.30 Trichrome Plate, the operator can adjust his contrast through one filter by adjusting his time of development, and then be *sure* of obtaining a matched set of separation negatives by following the same developing time when shooting through the other filters.

3. An emulsion with a "reciprocity effect" designed to give the maximum emulsion speed at the moderately long exposure times used in color separation work.

4. The development latitude necessary to give gamma values high enough for masked transparencies or reflection copy and low enough for unmasked transparencies.

5. A general reduction in the masking required on the original or the correction required on the negative.

For the most critical work, use the Ilford R.30 Trichrome Plate in conjunction with Ilford Tricolor Filters (Nos. 204, 404, 304) and Ilford Developer ID-2. R.30 plates are available in sizes up to 36 x 48″, and with a matte emulsion on special order. For further information and complete technical data, write us.



ILFORD INC.

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IN CANADA: Canadian distributors for Ilford Limited,
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Kaiser Named Plant Mgr.
Walter Kaiser has been named plant manager at Zabel Bros., Philadelphia printing and lithographing concern. Before joining the company, about a year ago, he had been with Edward Stern Co., Philadelphia. He has been, for some years, a member of TAGA and is a past president of the Philadelphia Litho Club.

B&B Advances Three

George B. Mullen has been appointed Western Division sales manager of Brown & Bigelow, St. Paul.

Mr. Mullen has been with the company in various executive capacities since 1946, when he joined it as a salesman. He has been field promotion manager, district sales manager and regional director of sales training. His headquarters will be in Los Angeles.

He succeeds V. W. Weaver, who has been appointed sales manager of the Los Angeles territorial district. Mr. Weaver also joined the company in 1946 as a salesman.

Mr. Weaver is succeeding M. Kevin Sweeney, who has been appointed regional director of sales training with headquarters in Los Angeles. Mr. Sweeney joined the company in 1947 as a salesman.

The company's divisional and territorial district headquarters in Los Angeles are at 712 S. Curson Ave.

•

Hennegan Issues Directory

The Hennegan Co., Cincinnati, which is celebrating its 75th anniversary, has published a new Cincinnati Graphic Arts Directory which lists 311 firms.

The companies are listed in 19 categories, largest of which is artists, with a total of 68, next comes printers, with 54; and advertising agencies with 44.

Other categories in the directory are: bookbinders, decalcomanias, electrotypers, embossing, engravers (photo), engravers (rubber), engravers (steel and copper plate), lithographers, lithographic plates, mailing lists, matrices-stereotype, photographers (commercial), photostats-blue prints, paper suppliers, silk screen printers, and typesetters.

Ray, Robidoux Merge

Ray Printing Co., Kansas City and the Robidoux Printing Co., of St. Joseph, Mo., have merged. The Ray company is largely an offset house while Robidoux is primarily letterpress.

R. L. Stagg of Ray and Mrs. Robert V. Russell of Robidoux will continue as presidents of the two companies. The companies will share equipment and printing processes in mutual expansion programs.

How to Clean and Dry Dampener Rollers Fast!

A great team—

the Jomac Roller Cleaner and Dampener Dryer

combine to cut downtime, add to cover life

Jomac Roller Cleaner—Cuts press downtime, increases cover life as much as 50%! Even heavily inked dampeners are quickly and easily cleaned. Wonderful for breaking in rollers—makes them round, true and lintfree.

Jomac Dampener Dryer—Rollers are dry minutes after cleaning. Color change time is greatly reduced, puts an end to press flooding. Made to fit any Jomac Roller Cleaner from 48 to 101-in. size.

You can purchase either of these units separately. But together they will pay for themselves within a year. Write for prices and full information.

Talk to the Lithographer Who Owns One

WRITE FOR THE NAME
OF THE NEAREST SATISFIED USER.

JOMAC *Inc.*

Dept. L-1, Philadelphia 38, Pa.

NEWS FROM enco®

New processing chemicals INSURE best results with Pre-Sensitized Plates . . .

Four new chemical products have been added to the Enco line. Formulated specifically for use with Enco Pre-sensitized plates, they give added assurance of top quality performance from any Enco plate (and they work well with other plates, too). Now you can process your plates with proven Enco supplies. Try these new products today!

ENCO GUM SOLUTION GS (8° Baumé) . . . A stabilized crystal clear pure Gum Arabic Solution in the right consistency for use with Enco Fine Grain Plates. Maximum protection; ideal for gumming on press and on the bench; preserved against souring with consistent Baumé maintained.

ENCO FOUNTAIN SOLUTION (concentrate) FSC . . . Clean running with sharp dots and plug free halftones make this a superior fountain solution. Mixed in proportion, one ounce to 2 ounces ENCO Gum Solution GS to one gallon of distilled water, will give a fountain solution with a pH about 3.8.

ENCO PLATE PRESERVER PS (asphaltum) . . . A ready to use asphaltum designed for use in storing Enco plates for an indefinite period without loss of ink receptivity.

ENCO EXTRA LONG RUN LACQUER ELR . . . For use on ENCO Aluminum plates. Easy to apply. Adds extra mileage with no loss of dot size.

ENCO PRESENSITIZED PLATES

Accepted by the professional lithographer as the quality plate —with good reason. Enco plates are easy and fast to process; they have a fine grain—for clean sharp dots with no plugged halftones and perfect ink/water balance; they are economical to use.

Enco Aluminum Pre-sensitized plates are available for negative or positive work and the Enco Pacemaster is perfect where low cost, speed and quality are paramount.

The combination of new Enco chemicals and Enco plates will insure top performance in plate and press room.

azoplate Corporation

558 CENTRAL AVE., MURRAY HILL, N. J.

American Litho Building

American Lithographing and Printing Co., Des Moines, Iowa, has begun construction of a new building at 2405 Bell Ave. The company is being forced to move from its present plant at 607 Third St. due to an urban renewal project in the city. The city council has authorized payment of $189,180 for the company's present site.

Plans for the new plant call for a 50 x 50 foot office building with a larger plant building connecting it. The entire unit will be air conditioned. The new site is 125 x 650 feet.

The plant is expected to be ready for occupancy by March 1, according to the company's president Joseph B. Hill.

•

Allied Buys Conn. Manifold

The Allied Paper Corp. Business Forms Division, Chicago, has purchased the Connecticut Manifold Forms Co. of West Hartford, Conn.

This makes the sixth business forms company purchased by Allied this year. The sales volume of the company's business forms division now approximates $15,000,000 per year.

Ellsworth S. Grant of the Connecticut Manifold Forms Co. will remain as president. The amount involved in the transaction was not disclosed.

The other plants which now comprise the business forms division include the Egry Register Co., Dayton, O.; the Stephen Greene Co., Philadelphia; the Carmax Corp. of Houston, Texas; the American Register Co., Boston, and the Charles E. Brown Printing Co., Kansas City.

•

Open New Pittsburgh Offices

Edward Stern & Co., Philadelphia, has moved its Pittsburgh office to new quarters in the Investment Building, as a part of an overall expansion program.

In line with the program, the company has advanced Stepren Tutelian to the post of regional sales manager in the Pittsburgh area. He has been with the company's sales staff since 1948.

New Glue Tipping Unit

Knight Engineering Sales Co., held a week-long house warming reception, Oct. 7 to 15, to mark the opening of their new Chicago sales office and sales room at 642 S. Clark St. Of special interest to lithographers operating small offset presses, such as the Multilith, Davidson, Whitin, etc., was the new Knight Model "C" carbon glue tipping machine, designed to eliminate the handling of carbons by hand.

Also demonstrated was a new roll press feeder attachment for small offset presses which, the company claims, offers the benefits and economy of web-press operation at a minimum cost. Among visitors during the open house period were many out of town lithographers who were in Chicago for the N. A. P-L convention last month.

•

Dick Richardson Moves

The Dick Richardson Co., printers-lithographers, moved to a new 25,000 square foot building at 1600 Truman Road in Kansas City. The modernized building which has both production and storage space, increases the company's space over that occupied in its former location by 16,000 square feet.

•

Duplicating Service Expands

Duplicating Service Co., which specializes in multilith, and mimeograph services, took over another half floor in addition to the floor it presently occupies at 309 N. 11th St., in downtown St. Louis. Shade Wilson is president.

•

K.C. Starts Trust Fund

A scholarship trust fund has been established by Kimberly-Clark Corp., Neenah, Wis., for the study of printing management at Rochester Institute of Technology.

Scholarships will be awarded on the basis of the national competitive examination conducted by the Educational Council through the College Entrance Examination Board. Award winners will receive up to $1,000 per year for four years of study.

The program will begin its first year with one scholarship valued at $1,000, the second year with two scholarships valued at $2,000 and so on for a total of four scholarships per year.

The scholarships are being granted under the auspices of the National Scholarship Trust Fund of the Educational Council of the Graphic Arts Industry.

The National Scholarship Trust Fund currently has 28 students in college under its scholarship program.

KC Printing Co. Founded

Kansas City Printing Co., is a new offset company recently organized and located at 4725 Tracy, in Kansas city.

President and general manager is Joseph Morgan, formerly with the I. J. Eagle Co.

Other officers are: Lester Bethel, vice president; John Kirk, secretary; Gilbert Smith, treasurer; and Andrew Hubbard, vice president in charge of production.

TOO GOOD TO MISS!
If you are not already profiting with INSTA-LITH Inks, start now! Here are the five big reasons why:
1—Costly down time is eliminated by perfect press performance
2—Screens stay razor sharp on long edition runs
3—Set instantly for same day back-up
4—Cost no more
5—Excellent mileage.
QUICK SERVICE COAST-TO-COAST
SEND FOR OUR COLOR SELECTOR
INSTA-LITH
BLACK AND COLORS
Flint Inks
Founded 1920
Formulated exclusively and precisely by
Flint Ink Corporation
Gravure • Letterpress • Lithographic • Flexographic
ATLANTA • CHICAGO • CLEVELAND • DALLAS • DENVER • DETROIT • HOUSTON • INDIANAPOLIS
JACKSONVILLE • KANSAS CITY • LOS ANGELES • MINNEAPOLIS • NEW ORLEANS • NEW YORK

Discuss Newspaper Web-Offset in California

Members of the California panel which discussed web-offset as it is used in newspaper printing are (l.-r.) Paul O. Broxon Jr, Dorsey Biggs, Howard Bezanson, Orville Dutro, and Archie Hocks Jr.

A WEEKLY newspaper publisher's first three weeks with a new offset press was the principal subject of discussion at a two-day California Newspaper Publishers Association conference, held at Berkeley Sept. 16 and 17. Archie Hicks, Jr., owner of the Encinitas *Coast Dispatch*, described his experience with his new Goss Suburban, used in lithographing his own newspaper and eight other publications. Comparing it to his previous newspaper press, he reported greater production, better reproduction quality (particularly of photographs) and more flexibility in preparation of ads. While production costs had gone up, he pointed out that future increased production would more than make up for that. He anticipated tripling production with only about 10% further increase in costs.

For his newspaper, Mr. Hicks is using machine composition and reproduction proofs, made carefully on a specially modified Vandercook 325, for everything except photographs and ads, which are pasted into page proofs. One-hundred-line veloxes are used for pictures; 133-line veloxes having been tried but discarded as less efficient. Ads are made up of some matter set by an ATF phototypesetter, combined with a wide variety of other material. Paste-up techniques have not yet been perfected, he said, and although he now finds hot metal best for text material, he believes he may eventually find photo-typesetting preferable.

Other participants in the panel discussion, which was titled "Offset and the Swing to the New Processes," were Orville Dutro of Duolith Presses, Inc., Los Angeles, press designer and newspaper publisher; Paul O. Broxon, Jr. of the Goss Co., San Francisco, and Dorsey Biggs of American Type Founders, Atlanta, Ga. Messrs. Dutro and Broxon discussed the future of newspaper web-offset presses, while Mr. Biggs gave data on comparative costs of newspaper composition in metal and photo-typesetting and discussed the development of film composition.

Moderator of the panel was Howard Bezanson, University of California Press publishing department production manager, who noted that in his recent experience with book production, the only reduction in costs had come from lithographers.

Newspaper production on sheet-fed offset presses was also discussed at the meeting. Mort Levine of the Milpitas *Post* and W. J. Norton and George Rosato of the Cupertino *Courier* spoke of the advantages, particularly the flexibility with regard to making up ads, that they had experienced in lithography. Charles Peckham, who worked with his father during the years he published the offset Sonora *Daily*, indicated his belief in the continuing practicality of sheet-fed equipment for both weeklies and dailies of small circulation.

Obituaries

John M. Moorehouse

John M. Moorehouse, 56, in charge of national used machinery sales for the Harris-Seybold Division of the Harris-Intertype Corp., drowned in a boating accident on Lake Erie during October.

He was thrown from a cabin cruiser when the boat was struck by a wave near the mouth of the Rocky River. He was picked up by a commercial fishing boat, but revival attempts by emergency police and fire squads failed.

He had been with the Harris company since coming to Cleveland from Cincinnati in 1949.

•

Joseph F. Halford

Joseph E. Halford, vice president, Segerdahl-Halford Co., Chicago litho firm, died Oct. 3 at the age of 61.

•

Herbert Gelb

Herbert Gelb, 47, general manager of Joseph Gelb Co., Newark, N. J., died in Mexico City, Sept. 22, after a brief illness. He had been there on a business trip representing the company, which was founded by his father.

Mr. Gelb was a member of the New York Litho Club and the NAPL.

•

George Schultz, 65

George Schultz, 65, treasurer of the Miehle Co., Division of Miehle-Goss-Dexter, Inc., Chicago, died suddenly on Sept. 20 in Chicago.

He had been with the company for 42 years, serving as assistant treasurer and assistant secretary before becoming treasurer in 1943.

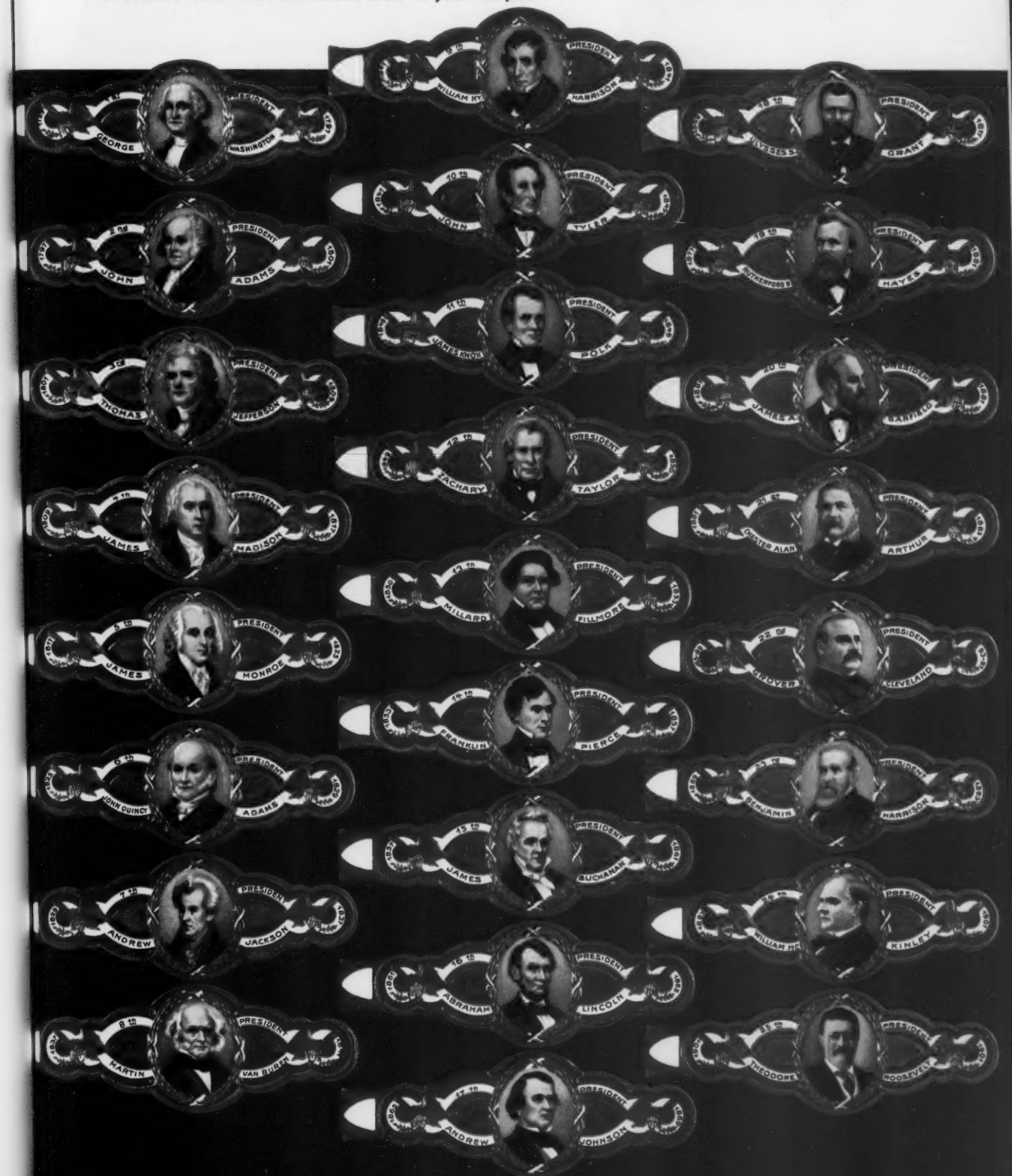
•

Irving L. Olson

Irving L. Olson, 50, a partner in the O'Dal Lithographers Corp., Beverly Hills, Cal., died Oct. 3 at his home in Beverly Hills.

CAST YOUR VOTE FOR HAMMERMILL OFFSET

Election year or any year, Hammermill Offset runs on a three-plank platform: **1** this sparkling white sheet reflects ink colors with sales-making realism **2** its Neutracel® pulp makes a level, fast-running surface **3** its measurably greater bulk feels important in a customer's hand. Elect Hammermill Offset for your next job.


1st PRESIDENT GEORGE WASHINGTON
2nd PRESIDENT JOHN ADAMS
3rd PRESIDENT THOMAS JEFFERSON
4th PRESIDENT JAMES MADISON
5th PRESIDENT JAMES MONROE
6th PRESIDENT JOHN QUINCY ADAMS
7th PRESIDENT ANDREW JACKSON
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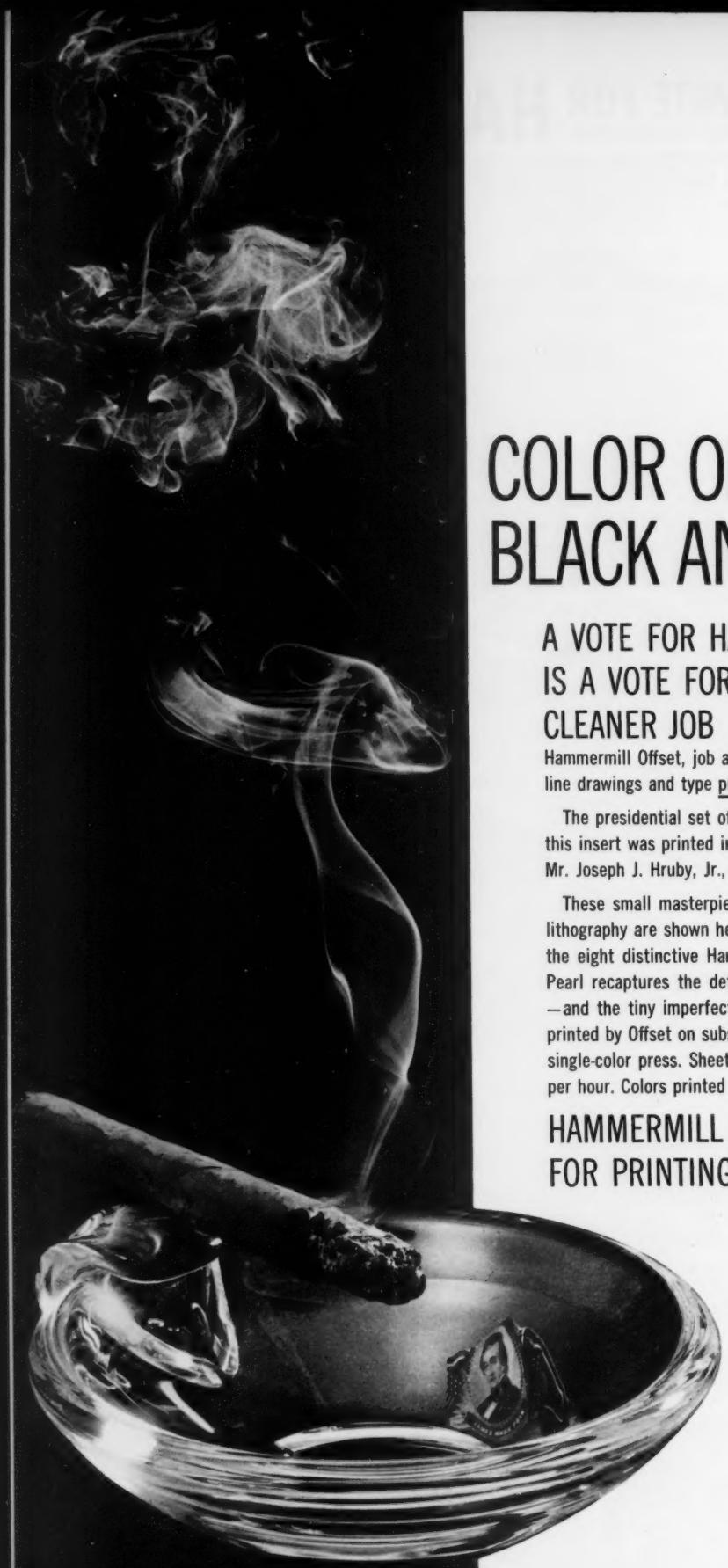
15th PRESIDENT JAMES BUCHANAN
16th PRESIDENT ABRAHAM LINCOLN
17th PRESIDENT ANDREW JOHNSON
18th PRESIDENT ULYSSES S. GRANT
19th PRESIDENT RUTHERFORD B. HAYES
20th PRESIDENT JAMES A. GARFIELD
21st PRESIDENT CHESTER ALAN ARTHUR
22nd PRESIDENT GROVER CLEVELAND
23rd PRESIDENT BENJAMIN HARRISON
25th PRESIDENT WILLIAM MCKINLEY
26th PRESIDENT THEODORE ROOSEVELT



COLOR OR BLACK AND WHITE,

A VOTE FOR HAMMERMILL OFFSET IS A VOTE FOR A SHARPER, CLEANER JOB

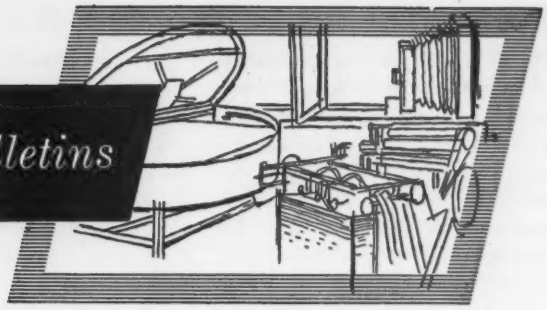
Many printers re-elect Hammermill Offset, job after job. You can print half-tones, line drawings and type profitably on this bright, level sheet.

The presidential set of cigar bands on the front of this insert was printed in 1907, and is owned by Mr. Joseph J. Hruby, Jr., of Cleveland.

These small masterpieces of turn-of-the-century lithography are shown here on luminous Pearl finish, one of the eight distinctive Hammermill Offset finishes. Pearl recaptures the detail in the lithographer's portraits —and the tiny imperfections, too. This insert was printed by Offset on substance 70, Pearl finish on a 42 x 58 single-color press. Sheet size 40 x 46. Speed 3000 per hour. Colors printed yellow, blue, red, black.

HAMMERMILL OFFSET... FOR PRINTING AT ITS LEVEL BEST

Equipment, Supplies, Bulletins



New Dual Purpose Line-Up Tables

NuArc Co., has introduced a new line of line-up tables, which have been designed to serve both as precision line-up tables and register and repeat tables.

The register and repeat feature will, according to the company, save time and insure accuracy when making over plates or making multiple press sheets. It is designed around adjustable stops which ride on removable bars which run parallel to the gear racks on the table. Six stops are provided on a front bar and six on a side bar. These are set to match the original plate or press sheet. The bars are then removed and stored so that they are available for precision registration if it becomes necessary to make new plates or multiple press sheets.

When used in the conventional manner the unit is a precision line-up table.

The lighting mechanism is the same as that used in the company's other tables.

Further information is available from catalog N300 ML, available from the company at 4110 West Grand Ave. Chicago, 51.

Precision Newspaper Press

"Color King", a newspaper press, which, according to its maker, has built-in precision for process color printing, has been introduced by the Waste King Corp., Los Angeles.

The press consists of a variable number of perfecting units and is web-fed. It is designed primarily for publishers of smaller newspapers, with circulations ranging from 3,000 to 50,000.

The press reportedly makes it possible for the small publisher to take advantage of the higher rates available from color advertising and obtain the savings possible with cold type process and rotary web-fed printing.

The company reports that new printing units can be added to the press at any time, according to the need of the publisher.

Information is available from the the company at 3424 Wilshire Blvd.

•

Plastic Snap-On Frames

Vinfloat Industries, Inc., Los Angeles, has introduced a new plastic frame for lithographed prints, which, according to the company, can be easily snapped onto any print.

The frames are antiqued in gold and can be custom made by the company to fit any size print or any motif. They can also be made with a name plate area at the bottom for use in advertising and promotional work.

Information and prices are available from the company at 9015 Miner St., Los Angeles.

Cite New Web-Offset Dryers

B. Offen Co. recently issued a four-page brochure containing particulars on its new line of multi-stage web-offset dryer units and compact multi-stage units.

The standard multi-stage units, which are designed especially for high grade commercial work, feature, according to the company, such items as flame and hot air combination for effective drying without injury to stock; standing warm-up to keep unit ready for use; high velocity air knives to remove solvent vapors from printing surfaces; automatic temperature controls and pneumatic movement during stopping and starting of press; and individual temperature control for each web.

The compact unit, which is designed particularly for newspaper, telephone directory and publication work, on newsprint as well as coated stock, features the ability to dry both sides of two webs simultaneously and an adjustment for one or two web operation; pneumatic burner throw-off and ignition; high velocity air knives, such as on the larger units; and automatic stopping and starting of dryer with the press.

Further information and copies of the brochure are available from the company at 29 East Madison, Chicago 2.

•

New "Litho-Perf" Package

The H. S. Boyd Co., Tulsa, Okla., has introduced a new package for its "Litho-Perf" perforation strip.

The dispensing box features a "product-view" window for quick, easy inventory on the supply at all times.

VariTyper Introduces New Headliner Model

THE VariTyper Corp., manufacturers of the Headliner photocomposing machine, has introduced a new model No. 840. This model is reportedly capable of delivering finished type proofs in multiple lines as opposed to the single continuous line capacity of the model 800.

The machine operates on the principle of photo-composition, utilizing 35 MM paper or film as the finished proof medium. Finished proofs, according to the company, can later be enlarged up to 15 diameters without fuzziness or distortion.

Composition is achieved through a simple character dialing operation, with the process of exposure, developing, washing and fixing a completely self-contained and automatic operation. It is reportedly noiseless and yields no odors or waste materials and provides a smudge-proof, permanent copy in about 90 seconds, ready for use.

The new model permits the return of exposed paper or film to the starting point so that a second and even third line of type can be added beneath the first line. This not only saves on material and time, but also simplifies the work involved in pasting up multiple lines of copy.

TypeMasters are changeable and single line masters are interchangeable between the two models. They are constructed of plastic and look like phono-discs. Different fonts available cover almost all styles of type currently in demand, with special hand-lettering styles and symbols also available. Sizes range from 18 points to 72 points.

Further information is available from the company at 720 Frelinghuysen Ave., Newark, N. J.

•

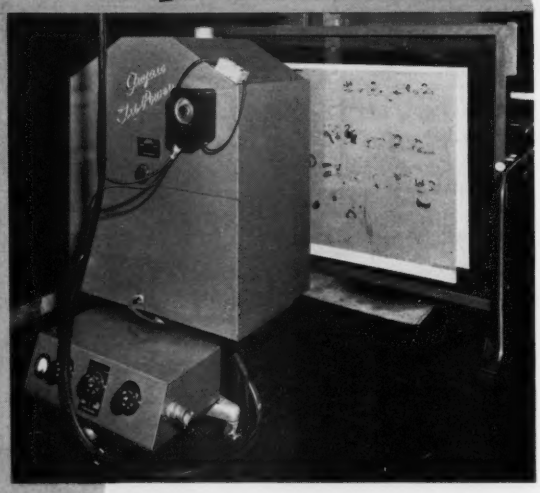
Graphic Pub. Adds New Guide

Graphic Publishing Co., Inc., 240 West 40th St., New York 18, N. Y., publishers of the *Duo-Color Guide* and *The Four-Color Process Guide*, have been named U. S. distributors of the *Grand Book of Three-Color Blending*.

The latest addition to their line is produced in Western Germany and shows over 10,000 three-color combinations in both letterpress and offset. The aim of this book is to provide visual evidence to those engaged in color reproduction of the almost limitless color effects and combinations that can be obtained by the proper selection and blending of three colors. A total of 100 pages are devoted to illustrations of color blending—50 pages in letterpress, 50 by offset. Each page contains mixing tables and examples of use in solid and screen combinations.

A four-language text (English, German, French and Spanish), illustrated in color and augmented by tables and charts, provides a technical introduction to the subject. In this section are discussed and shown the basic colors, screen effects, proper combinations of screen ruling and paper, color gradation tables, the effects of printing sequence, etc.

The TRI-POWER ARC LAMP



"—COVERS OUR 60" x 80" VACUUM FRAME. The intensity is strong enough to KEEP OUR EXPOSURES VERY LOW. It GIVES US A TWO-LAMP PERFORMANCE FROM A SINGLE ARC LIGHT SOURCE. We are very busy using the lamp on a three shift basis."

—Edgar B. Rohnke, Parthenon Press, Nashville, Tenn.

IN COST PER EXPOSURE THE POWER REQUIRED IS 33% LESS AND THE CARBON COST 72% LESS

than the next most powerful lamp.

Operates on standard 3-phase service. Burning a 2½ hour trim of three inexpensive carbons, it produces a single light source three times as powerful as the next most powerful lamp, and six times as powerful as most lamps.

30-DAY TRIAL WITHOUT OBLIGATION

Write for literature

Strong — A GENERAL PRECISION COMPANY

THE STRONG ELECTRIC CORP.
17 CITY PARK AVE. • TOLEDO 1, OHIO

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

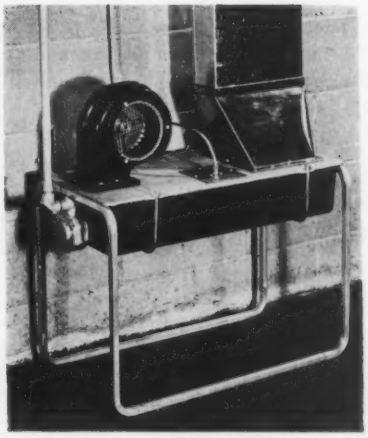
New Humidifier Works Without Steam

A NEW high capacity, automatic, controlled evaporative humidifier has been introduced by Armstrong Machine Works, for printing plants where steam is not available or where its use is impractical. Called the Humid-i-maker, the machine uses heated water to achieve its capacity, which reportedly is up to 16 pints of water per hour.

The unit consists basically of a water tank, a level control, a heating element, a blower and a humidistat.

In operation, the humidistat is set for the desired relative humidity. When the humidity drops just below the setting, the humidistat starts the blower, which blows air over the heated water in the tank. The air picks up moisture and carries it to the space to be humidified. When the desired humidity is reached, the humidistat stops the blower.

Tank water is heated by a hot-water heating coil or by an electric



heating element. Tank water level is kept constant by an automatic float control.

Installation is reportedly simple and flexible, as the unit may be mounted on a floor stand, hung from a ceiling, or attached directly to warm-air ducts.

Full information and descriptive literature is available by writing to Armstrong Machine Works in Three Rivers, Mich.

•

Nitro-Matic Developing System

Amport International Inc., is offering a new film developing system which features nitrogen burst and temperature control.

The units consists of two actions, one, which has four bins for developing; the other, which has three bins, one for acid, one for hypo, and one, with continuous water flow, for rinse.

The system can be made in any size needed, and has a separate control panel for burst control, temperatur control and timing. It is so designed that film is carried through the process in a basket which, the company reports, prevents damage to its surface during loading and unloading operations.

Information is available from the company at 3319 W. Magnolia Blvd., Burbank, Cal.

Used by the top Graphic Arts camera manufacturers

Sharpest, Highest Fully Color-corrected Lens available

GOERZ RED DOT ARTAR

• Fully corrected apochromat • Hard coated air spaced optics • 4" to 70" focal lengths
• For all color or black and white applications

C. P. GOERZ AMERICAN OPTICAL COMPANY INWOOD 96, L. I., N. Y.
Western States Distributor: LA GRANGE, INC., Hollywood 38, Cal. • Midwest Distributor: WHITE PHOTO SALES, INC., Chicago 43, Ill.
Canadian Distributor: W. E. Booth Company Limited, 12 Mercer St., Toronto, Can.

Introduce Comet 45 Lamp

Strong Electric Corp. has released a brochure on its new Comet 45 arc lamp for printing, which describes the features of the new unit.

Among the features cited in the brochure are a five-minute timer; 20 x 20″ metal reflector and carbon storage area. In addition, the unit is motor driven and operates on standard 110 volts, with no special wiring required.

The arc burns a trim of 6 mm x 7-inch-high intensity photographic carbons and reportedly throws a uniform light over an area up to 28 x 36″.

The company reports that the striker, feed and return are all automatic in the lamp. After a total burning time of one hour and ten minutes, carbon holders automatically return to a new trim position and all circuits are opened to insure safety while installing a new carbon.

•

Hamilton Equipt. Book

A new, 20-page catalog of Hamilton Lithographic Equipment, was recently released. It presents the company's latest designs in layout tables, retouch, drawing and paste-up tables, etching tables, developing sinks and storage equipment, and includes labor-saving accessories for the pressroom and bindery. Special emphasis is given to the Formliner, which reportedly provides instant, accurate, uniform ruling at any angle on a rotating, non-glare, glass surface. Copies of the catalog, No. AP-315, are available from Hamilton Mfg. Co., Two Rivers, Wis.

•

Large-Image Photocopier

A new compact photocopier which will reportedly copy large-size documents has been introduced by A. B. Dick Co., 5700 West Touhy Ave., Chicago.

Known as the Model 114, this addition to the company's photocopy line copies original documents up to 15″ wide by any length—engineering drawings, accountants' work sheets, statistical data, reports, and artists' drawings, in sharp black-on-bone white, frequently better than the originals the manufacturer reports.

•

Offer Photo-Proofing Paper

Anko-Graphic a new photographic proofing paper for use by lithographers, photoengravers, and advertising agencies, has been developed by Anken Chemical and Film Corp.

The paper, which reportedly provides clean sharp definition without mush and halo, is designed to be used in normal room light without fogging, eliminating the darkroom for preparing photographic proofs. According to the company, the paper can be developed in either A and B litho developer or the D-72 paper developer.

It is available in eight standard sizes or in rolls from 20″ x 50′ to 42″ x 150′. Special sizes are also available.

Samples and further information are available from the company in Newton, N. J.

•

RICHARD M. ONG, vice president and sales manager of Grimes-Joyce Printing Co., Kansas City was recently honored with a dinner party on his 25th year with the company.

YOUR **PROOF PRESS** OR **LETTERPRESS**
AND POLYCHROME'S **OFFSET PLATE**
WILL MODERNIZE YOUR SHOP

1. Compositor sets type and cuts and locks-up chase.
2. Type is inked and P/C KOTE Offset Plate laid down—positive image that is transferred drys hard and sets rapidly.
3. P/C KOTE Offset Plate is mounted on the offset press and run.

P/C KOTE means a letterpress shop may enter the offset business with minimum expenditure . . . all that is necessary is an offset press, chemicals, ink and P/C KOTE Offset Plates. No necessity for lights, darkroom and camera equipment until the offset business develops.

P/C KOTE offers printers a versatility in operation never before possible . . . instead of the letterpress being bogged down with dozens of short run jobs, now they can be shifted to offset; while the letterpress may be used for more important work.

P/C KOTE speeds work . . . "gang-up" and "step-up" jobs on a single plate, permitting more work to be done faster.

P/C KOTE saves money on metal of standing jobs in the galley . . . it is not necessary to invest large sums in jobs that have to be stored for repeats. Several P/C KOTE Offset Plates can be made from the original type and stored in an ordinary filing cabinet for future re-runs. Type may be broken down and promptly re-used, releasing money for other business uses.

☐ Please send more information about the P/C KOTE Offset Plate, a copy of the Direct Image Reference Guide, and a copy of the Polychrome Offset Catalog.

We have _____ size offset press.

Name_____

Firm_____

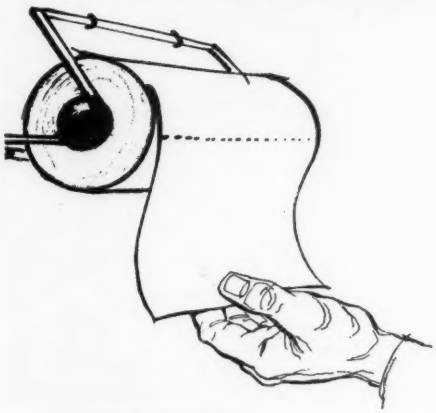
Address_____

City_____ State_____

Manufacturers of Graphic Arts Supplies
POLYCHROME CORPORATION
2 Ashburton Ave., Yonkers, N.Y.

"He's been walking on air ever since he started using WEBRIL!"

WEBRIL WIPES to perfection



THE KENDALL COMPANY
Fiber Products Division

PAINT BRUSH ACTION means uniformly thin coatings for longer-running, trouble-free plates.

Can't Scratch—contains only pure, soft cotton.

Super Absorbent—removes the last traces of etches and acids.

Lintless—even with lacquer, developing ink, or gum arabic.

Amazing Wet Strength—interlocked fibres can't come apart. Perfect for applying developing ink and lacquers and for developing out and gumming.

Handy—You simply tear 8" square, precut wipe from convenient wire rack. No hunting, no cutting—always at arms length.

WEBRIL®
WIPES
PATENTED

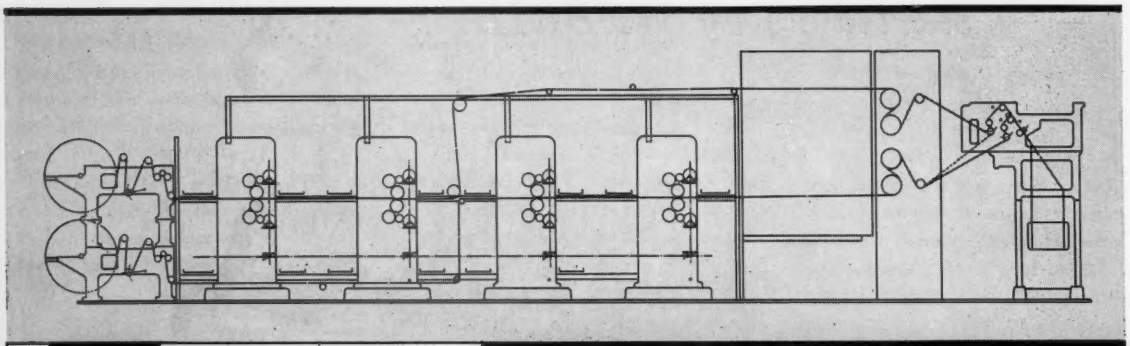
MAIL THIS COUPON

The KENDALL Company
Fiber Products Division, Dept. ML-110, Walpole, Mass.

I'd like to try Webril Wipes — free. Please send me samples for testing.

Name_____
Company_____
Address_____
City_____ State_____

With the ATF 22¾ x 35 Publication Press you can handle all these color combinations and signature sizes



		number of webs	colors on each side of web	Number of folded pages			
				Newspaper, maximum page size 17½ x 22¾	Tabloid, 11⅜ x 13 to 17½	Magazine Signature, 6½ to 8¾ x 11⅜ untrimmed	Magazine Signature, 5-11/16 x 17½ untrimmed
1 UNIT		1	1	4	8	16	16
2 UNITS		1	2	4	8	16	16
		2	1	8	16	32	32
3 UNITS		1	3	4	8	16	16
		1	1	8	16	32	32
		1	2				
		3	1	12	24	48*	48
4 UNITS		1	4	4	8	16	16
		2	2	8	16	32	32
		2	1	12	24	48*	48
		1	2				
		4	1	16	32	–	–

*Signatures of over 32 pages are possible but weight of stock would be the determining factor.

Along with extreme flexibility, this ATF Publication Press gives you special features that spell out high production on a variety of jobs: newspapers, magazines, catalogs, books.

- Grouped controls for ink form rollers, ink ductors, and water dampeners.
- Independent upper and lower unit register controls for side and running way adjustments.
- Printing units and roll stands are gear driven, eliminating old-style chains.
- Upper and lower plates can be changed simultaneously in less than five minutes without breaking web.
- Both full width cross perforation and slot vertical perforation to eliminate corner wrinkling in folding operation.
- Speed up to 25,000 cylinder revolutions per hour for both press and folder. (Reduced speed required for delivering right angle and chopper folded signatures.)

Get the facts on the economics of web printing. Write for ATF's Web-Fed vs. Sheet-Fed Booklet—a comparison of web offset printing costs with sheet-fed costs (letterpress and offset).

ATF

American Type Founders

Web Division, 200 Elmora Avenue, Elizabeth, N. J.

Better, more profitable printing . . .
from the most complete line of equipment

New K.C. Uncoated Paper

Kimberly-Clark Corp., Neenah, Wis., reports that it is now manufacturing Metro uncoated offset printing paper to a new brightness level.

The paper is recommended for folders, brochures, broadsides, catalog inserts, house organs and the like.

It is stocked in basic weights of 50, 60 and 70 pounds, with special weights available on inquiry.

•

New Re-usable Plate

An offset plate process, which saves metal through multiple re-use has been introduced by Printing Developments Inc., a wholly-owned subsidiary of Time Inc.

Known as M-R-X (Metal Reuse X-Times), the process was demonstrated at the annual convention of the National Association of Photo-Lithograhpers in Chicago, last month. The new plate is reportedly the only wipe-on process on the market that can be re-used.

The process features a new type of pre-treated metal plate and special chemicals which make it possible to use plates over again. Metal is saved by application of an image remover and metal conditioner which remove the old image and recondition the plate for additional use. There is little wear on the metal, according to the manufacturer.

Field-testing has indicated that material cost savings range from 31% to 58%, based on four-time re-use of metal, the company reports. A plate can usually be completely processed in less time than that required for a presensitized plate, the company states.

Information is available from the company at Rockefeller Center, New York 20.

•

Offer Non-Rust Neutro-Stat

Simco Co., manufacturer of Neutro-Stat aerosol anti-static spray, has introduced a new spray to its line which, the company guarantees, will not rust metal parts on which it may be directly sprayed.

The spray was developed primarily for use on machinery and metal surfaces where static electricity may be a problem. It is also useful for styrene surfaces, the company points out, where the standard spray is not suitable.

The company has also introduced a new long-range static eliminator which is reportedly able to neutralize static on materials up to four feet away.

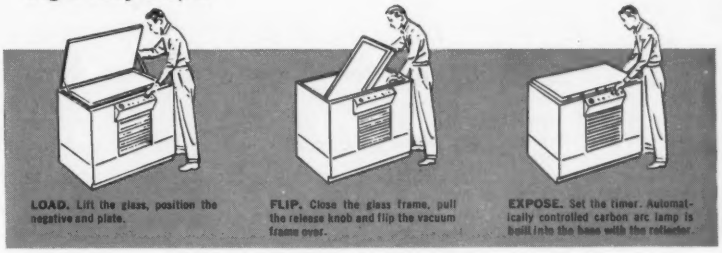
Called the Aerostat, the unit is available in two sizes, 10 and 20" wide. Both sizes can be supplied with either standard or "shockless" neutralizer heads; and light free shields, if the machine is to be used on photo-sensitive materials.

The machine is useful, according to the company, at the delivery end of presses with fly delivery when running bible stock, plastic sheets, or other stocks which become electrically charged by air friction.

Additional information is available from the company at 920 Walnut St., Lansdale, Pa.

Trianqle Solved by a Diamond!

The first corner of the triangle was the boss of an offset shop who couldn't pay enough attention to his pretty wife, who peevishly retired with a book night after night because of the 3rd corner of the triangle, an awful nerve-wracking production schedule which kept the boss down at the plant. Then one day the boss read a nuArc ad which told him that he could eliminate his plate-making bottlenecks with the nu-arc flip-top platemaker, which permits skilled or even relatively unskilled personnel to make perfect plates in a hurry, simply by following 3 easy steps:



LOAD. Lift the glass, position the negative and plate.

FLIP. Close the glass frame, pull the release knob and flip the vacuum frame over.

EXPOSE. Set the timer. Automatically controlled carbon arc lamp is built into the base with the reflector.

So, after purchasing the flip-top size most suited to his shop (13x18, 17x24, 21x26, 28x32, 30x40, and 43x52, models are available), the boss, his wife and all the good fellows at the shop stayed happy ever after.

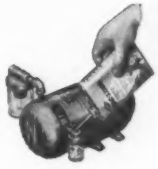
For full details send for the latest "flip-top" bulletin A-500ML.

nuArc® company, inc.
4110 W. Grand Ave.
Chicago 51, Illinois
SALES AND SERVICE
New York • Los Angeles

new VAC-LUBE

COMPOUNDED ESPECIALLY FOR VACUUM PUMPS

Gives better lubricating—less wear—provides maximum pump protection. Can has easy pour spout. $1.00 pint—AT YOUR nuArc DEALERS NOW!



NEW plate for duplicators and small offset presses (8½ x 12 to 17 x 22)

S. D. Warren's FOTOPLATE* 8

16 plate sizes • Negative-working, presensitized

8 WAYS YOU BENEFIT WITH FOTOPLATE 8

1. **Low Cost** — priced from 12¢ to 54½¢.
2. **Short Exposure** — fast sensitizer reduces exposure time.
3. **High Quality Reproduction** — The quality of reproduction of type, solids and halftones is enhanced by the strongly grease-receptive image on FotoPlate 8.
4. **Easy Development** — FotoPlate 8 can be placed on press with no prior developing, or can be processed with Warren's FotoPlate Developing Ink.
5. **Fast Roll-Up** — New sensitizer provides greater affinity for ink. Result: faster roll-up, less waste, short-cut processing.
6. **Plastic Grain** — Fine-grained plastic surface of FotoPlate 8 is designed for clean running and faithful reproduction of copy.
7. **Press Stability** — Caliper is a sturdy .008". This provides stability and easy handling on press.
8. **Sensitized One Side Only** — This permits 100% use of plates, with less spoilage than with two-sided plates.

FotoPlate 8 Presensitized lithographic plates
Another FotoPlate product from
S. D. Warren Company, 89 Broad St., Boston, Mass.

Warren's STANDARD

*Trademark

Contact these distributors for new FotoPlate 8:

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BALTIMORE, MD.
George R. Keller, Inc.
Phillips & Jacobs, Inc.
BATON ROUGE, LA.
Sograph, Inc.
BOSTON, MASS.
Bridgeport Engravers Supply Co., Inc.
Pitman Sales Co. of New England, Inc.
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BUFFALO, N. Y.
Marks & Fuller, Inc.
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George R. Keller, Inc.
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McKinley Litho Supply Co., Inc.
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CLEVELAND, OHIO
Bridgeport Engravers Supply Co., Inc.
Cleveland Litho Graining & Supply Co.
COLUMBUS, OHIO
Salem Graphic Supply Co.
DALLAS, TEXAS
Lew Wenzel and Co. of North Texas
Litho Offset Supply Co.
DAYTON, OHIO
Salem Camera Company
DENVER, COLO.
Lew Wenzel and Co. of Colorado
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Garrick Photo Supply Co.
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INDIANAPOLIS, IND.
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LOS ANGELES, CALIF.
The California Ink Company, Inc.
Smart Supply Co., Inc.
Lew Wenzel and Co. of Southern California
LOUISVILLE, KY.
Reliable Lithographic & Offset Supply Co.
MILWAUKEE, WIS.
Reimers Photo Materials Co.
MINNEAPOLIS, MINN.
T. K. Gray, Inc.
Litho Supply Depot, Inc.
MORRIS, N. Y.
Associated Graining Company
NASHVILLE, TENN.
Southeastern Printing Ink, Inc.
NEWARK, N. J.
Globe Printers Supply Co.
NEW ORLEANS, LA.
Printers Supply Mart
NEW YORK, N. Y.
Chemco Photoproducts Co., Inc.
Harold M. Pitman Company
Roll-O-Graphic Corporation
PEORIA, ILL.
Lens & Camera Co.
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PORTLAND, ME.
Northeastern Composition Co.
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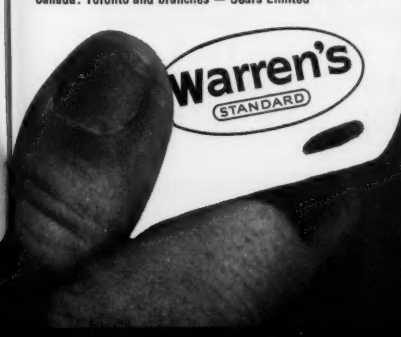
ROCHESTER, N. Y.
Marks & Fuller, Inc.
ST. LOUIS, MO.
Rissmann Graphic Arts Supply Co.
SAN ANTONIO, TEXAS
Texas Type Foundry
SAN FRANCISCO, CALIF.
The California Ink Company, Inc.
Lew Wenzel and Company
SEATTLE, WASH.
The California Ink Company, Inc.
SECAUCUS, N. J.
Harold M. Pitman Company
SHREVEPORT, LA.
Film Arbor, Inc.
TOLEDO, OHIO
Toledo Lithograin and Plate Co.
TULSA, OKLA.
Lew Wenzal and Company of Oklahoma
WASHINGTON, D. C.
George R. Keller, Inc.
WINSTON-SALEM, N. C.
Young-Phillips Sales Co.

U. S. A. and Canada (principal cities)
Addressograph-Multigraph Corporation
Canada: Toronto and branches — Sears Limited



Introduce Thinpaque Paper

A new grade of thin paper, to be known as Thinpaque, has been introduced by Allied Paper Corp., 165 N. Michigan Ave., Chicago.

Thinpaque superiority will consist of increased opacity; excellent runability; freedom from the "finger moisture problem when turning pages; the ability to withstand more pressure in binding without pages sticking together, and a bulk of 1,600 pages per inch. The stock can be sized for either letterpress or offset reproduction.

•

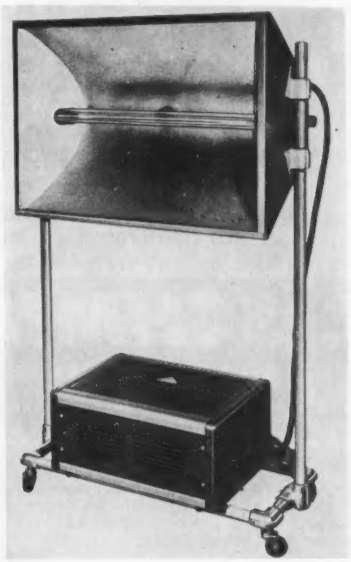
Ascorlux Lamps Featured

Three new additions to American Speed Light Corp's line of arc lamps for various graphic arts applications, have been featured in the company's exhibits at recent trade shows, notably the NAPL show in Chicago last month.

A roll-around arc lamp for use with vacuum printing frames, was of prime interest. The unit is completely self-contained, with the power supply mounted in the base. The whole lamp is mounted on casters for easy mobility.

Another of the units is a pair of 1000-watt printing lamps mounted on a single base, designed for use in copy board applications. The third lamp consists of four light tubes mounted within a reflector box and positioned at right angles to develop maximum light intensity, where penetration of heavy masking or filtering is necessary. Information on all the new units is available from the company at 63-01 Metropolitan Ave., Middle Village 79, N. Y.

New roll-around Ascorlux lamp.



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Todd Opens New Plant

Todd Co. of Canada has opened its new plant at Greenfield Park, Que. for the manufacture and printing of checks and business forms.

•

LEGAL NOTICE

Statement required by the Act of August 24, 1912, as amended by the Acts of March 3,1933, July 2, 1946 and June 11, 1960 (74 Stat. 208) Showing the ownership, management, and circulation.

Of Modern Lithography, published monthly at Caldwell, N.J., for October 1, 1960.

1. The names and addresses of publisher, editor and business managers are: Publisher, Wayne E. Dorland, P.O. Box 31, Caldwell, N.J.; Editor, Hamilton C. Carson, P.O. Box 31, Caldwell, N.J.; Managing Editor, Paul Geiger. P.O. Box 31, Caldwell, New Jersey; Business Manager, Ralph E. Dorland P.O. Box 31, Caldwell, N.J.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and address of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Industry Publications, Inc., P.O. Box 31, Caldwell, N. J.; Wayne E. Dorland, P.O. Box 31, Caldwell, N. J.; Ralph E. Dorland, P. O. Box 31, Caldwell, N. J.; Eleonore T. Kanar, P.O. Box 31, Caldwell, N. J.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortages, or other securities are, (If none, so state) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required by the act of June 11, 1960 to included in all statements regardles of frequency of issue.) 6652.

Signed Hamilton C. Carson, Editor.

Sworn to and subscribed before me this 15th day of Sepetember, 1960.

(Seal) David R. Tryon

(My commission expires May 11, 1964)

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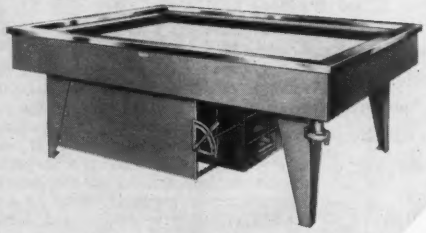

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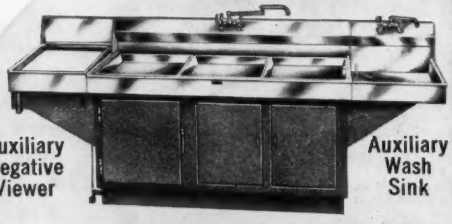

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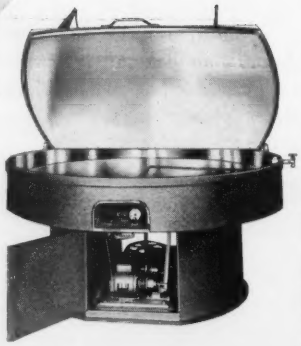

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Bernard Callahan Honored by Chicago Lithographers

CHICAGO lithographers last month gathered to pay tribute to one of their associates whose efforts during the past two decades have contributed to establishing the industry in Chicago on a progressive basis.

At a testimonial dinner in September, 74-year-old Bernard E. Callahan was honored for his part in organizing and guiding the Chicago Lithographers Association, bargaining agency of the industry in its dealings with labor; in founding the Chicago Lithographic Institute, noted as one of the country's outstanding technical training schools for lithographic craftsmen; in activities of the Lithographers and Printers National Association, and in constant support of the Lithographic Technical Foundation.

Mr. Callahan entered the graphic arts in 1912, when he became associated with the James T. Igoe Printing Co., in Chicago. In 1931 he organized Inland Lithograph Co., of whose board he ultimately became chairman. When his company in recent years was merged with the Magill-Weinsheimer Co., he became vice president of the consolidated Inland-Magill-Weinsheimer Co.

Master of ceremonies at the dinner was George A. Canary, former international president and vice president of Local 4, Amalgamated Lithographers of America. Among speakers who eulogized different phases of Mr. Callahan's career were Fred Zeitz of Roberts & Porter, and C. A. Nordberg of Chicago Offset Printing Co., who recalled his part in the early days of the Chicago Lithographic Institute. Relating the story of the establishment of the Chicago Lithographers Association was James S. Armitage, its president and a vice president of Inland-Magill-Weinsheimer Co. Speaking for Local 4 was Harry F. Spohnholtz, current president.

Among highlights of the evening program was the conferring of the honorary degree of Doctor of Lithography on Mr. Callahan, a ceremony complete with caps and gowns, and with William O. Morgan, first executive director of the Chicago Lithographic Institute, making the presentation.

Included in the gifts to Mr. Callahan was a bound volume of testimonial letters from his friends around the country, which was presented by Arch MacReady, executive director of the Lithographers Association. Another gift was a large oil painting of Mr. Callahan from his employees at Inland Lithograph Co. There was, too, a plaque bearing signatures of many of his associates and co-workers over the years and a silver service tray etched with signatures of those with whom he worked founding the Lithographic Institute.

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LITHO CLUB NEWS

(*Continued from Page 86*)

corrections" would greatly improve quality control programs.

"Quality control is not confined to the pressroom," he concluded, "but that is where it should start." Furthermore, small shops can have quality control programs without a tremendous expense. "Give your pressman a densitometer and some training and you will have a program started," he advised.

On Oct. 24 the club heard a talk on platemaking, with emphasis on new plates and techniques. Vice president Howard Harcke reported that the Sept. 17th "Fall Frolic" at Eddington Farms was a big success. This month (Nov. 28) the program will be devoted to typography. New members include Robert A. Toft, Hibbert Printing Co.; John J. White, Cuneo Press; and John G. Meehla, Curtis Publishing Co.

Dayton

Cover Blanket Care

The Dayton Litho Club considered the manufacture and care of offset blankets at the October meeting. Thomas Connelly of Reeves Bros. Inc., led the discussion, pointing out that many lithographers do not get the most for their money from blankets because they do not take proper care of them.

Twin City

Examine Web-Offset

Keene Addington, production manager of the Web Division of the Miehle Co., Chicago, addressed the Oct. 13 meeting of the Twin City Litho Club on "Web-Offset—Its Operation and Its Future."

Mr. Addington approached his subject in general terms, citing the advantages and disadvantages of working with web-offset. In his talk he showed the relationship of web-offset to the overall field of offset printing.

The November meeting of the club will feature a panel on press problems. The educational portion of the December meeting will be run by Harris-Seybold Co. representatives, who will discuss quality control on the press.

The annual Christmas party of the club has been planned for Dec. 3 at the St. Paul Hotel.

Buffalo

Compare U.S., Canadian Litho

Neil Kinley, plant superintendent, Reid Press Ltd., discussed "The Difference in Lithography as in Canada and the United States," at the October meeting of the Buffalo Litho Club.

After his presentation, a panel, moderated by Norm Bernhardt, general superintendent, Niagara Lithograph Co., considered the question from a number of viewpoints.

Serving on the panel with Mr. Bernhardt were James B. Randall, Reid Press Ltd.; Paul L. Ambra, Ansco Representative; and Glenn Begert, Pollack Poster Print Co.

New York

Discuss GAE Dampener

The educational program of the opening meeting of the 1960-61 season of the New York Litho Club, featured a discussion of the dampening system newly developed by Graphic Arts Engineering Associates.

Arthur W. Sejack of GAEA described the system which is based on a fountain roller whose speed is completely variable, to insure control of the flow of dampening solution. He showed a special demonstration model of the system, to show the difference between it and other systems.

In addition to Mr. Sejack's presentation, Julie Graifman, Roll-O-Graphic Corp., New York, discussed the advantages of the new "on the press" perforating, punching and scoring devices.

New members of the club are Marion Carl Fontana, Joseph Schwartz, Anthony J. Math, Jr., Joseph Huszar, Jr., Joseph Miroldi, John T. Horsfall., and Harry R. Showers.

The club's annual Christmas party will be held Dec. 9 at the Biltmore Hotel. Reservations are available from Richard Roese at 67 Titus Ave., Carle Place, N. Y.

Milwaukee

Discuss Litho Trends

"Trends In Lithography" was discussed by Grant C. Beutner of the R. B. & P. Supply Co., Milwaukee, Wisc., at the monthly dinner meeting of the Cincinnati Litho Club on Oct. 11. Glenn Menzer, superintendent of the Offset Plate Graining Co., was the program chairman.

A tour in Sept. through the plant of the Champion Paper & Fibre Co. in nearby Hamilton, O., was attended by 37 members.

Members of the New York Club looked like any group of 1890 picnickers at the club's annual picnic in September. They are (l. to r. seated) Louis Happ, Peter Rice, president, Edward Blank, and Victor De Rose; (standing) Patrick Kirkpatrick, Ernest Gruen, William Carey, Philip Quartararo, Louis Federmack, Richard Roese, Thomas Dagnolli and Salvatore Vaccarino.

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TECH. BRIEFS

(*Continued from Page 74*)

The fading is best prevented by varnishing with a lacquer containing a UV absorber. E.g. 0.5% of Permyl B 100, dissolved in a cellulose nitrate solvent, was added to a cellulose nitrate lacquer, the lacquer being adjusted to a suitable viscosity by modifying the amount of solvent used.

Lithography—General

A Progress Report on the Lithographic Industry. Otis E. Wells. *Lithographers Journal* 44, No. 12, March 1960, pp. 10, 11, 12 (3 pages). The research and educational work of the Lithographic Technical Foundation has contributed immeasurably toward keeping the lithographic industry growing and prospering. Its constant search for new methods and new techniques has done more toward helping lithographers maintain a profit margin throughout the years than any other single factor. Some specific projects mentioned as having been reported cover "balanced inks," photographic masking, paper color, comparison of methods of color printing, testing of light sources to replace arc lamps, measurements of things which define quality, the Press Inkometer, the Nicohol plate treatment, zinc plate studies, studies of paper and ink properties and how hey effect printing and evaluation of new materials and products. Two-day seminars are mentioned as means of putting new information to work.

The Heart of Lithography is Stone—Part 2. Joan K. MacNeary. *Modern Lithography* 28, No. 2, February 1960, pp. 42-43 (2 pages). (Part 1—October 1959, p. 69). Lithographic history in the "Stone Age" in the U.S. in the 19th Century involved many forms of illustrations. Some of those mentioned include portraits of Washington for home use, sheet music covers, scenes from the Revolutionary, Mexican and Civil Wars, etc. Some of the earlier lithographers including Currier and Ives, are mentioned.

Stone Age Revisited. Anon. *Modern Lithography* 28, No. 3, March 1960, pp. 28, 29, 30, 143 (4 pages). Story on a small shop still doing lithography on stone. Much of it is related to limited edition book work and the image, as drawn by the artist on stone, is transferred to a zinc plate and run on a modern offset press. "The special attractiveness of the stone transfer process is the fine halftone quality which can be obtained because of the fine grain of the stone. Even the finest halftone screen would not match the reproduction."—"A litho stone is equivalent to a 1,000-screen job by conventional lithography." The process is described step-by-step and with nine illustrations. Stone lithography as an artistic process has been growing in popularity in recent years.

Color Control Charts. Anon. *Modern Lithography* 28, No. 3, March 1960, pp. 47, 141, 143 (3 pages). Description of a color control chart book originally developed by a printer for his customers, now available generally. Inks, paper (both offset and enamel) and press techniques are those generally available. Two-color and multicolor combinations are shown. 1 Illustration.

Planning for a New Press. Richard J. Schmied. *Modern Lithography*, 28, No. 2, February 1960, pp. 38-39 (2 pages). Author points out that a new press will not go into production by itself. Accessory equipment such as suitable lighting, water supply, paper storage and skids, roller racks, smaller items in a list, etc. should be planned as soon as the press is bought and before installation. Pressman training is another item. A step-by-step procedure is given for testing out with a test plate and blanket.

Plate Storage Provides Library of Valuable Material. Anon. *The Inland and American Printer and Lithographer* 144, No. 4, January 1960, pp. 72-73 (2 pages). Western Printing and Lithographing Company has model storage department. Fourman team keeps files of plates, proofs, films and press sheets. It supplies the firm's salesmen with useful materials for future projects.

Where Has Litho Grown? Anon. *Modern Lithography* 28, No. 4, April 1960, p. 38(1 page). U.S. Census of Manufactures, 1958, Bulletin Mc(P)-27B-3. A special ML Staff analysis. A U.S. map showing percentage gain, 1958 over 1954, of value added by Manufacture and gain in total employees in the litho industry.

Quality Lithography Requires Utmost Attention to Fine Details. J. Tom Morgan, Jr. *The Inland and American Printer and Lithographer* 144, No. 4, January 1960, pp. 52, 3, 4, 5, 103 (5 pages). Author first discusses the quality of lithographic printing in general terms, then goes on to describe some of the steps taken to control quality in his plant. A step wedge with 15 steps with 50 percent increment in exposure and each step numbered is one tool used. This is correlated with densitometer reading for both black and process colors on various papers. This serves as a "common denominator" of understanding among various departments. Its use in the various steps of the process is described.

How to Keep Offset Press Feeders Functioning Properly. Charles W. Latham. *The Inland and American Printer and Lithographer* 144, No. 4, January 1960, pp. 50-51 (2 pages). Author first points out the consequences of feeder malfunctions, particularly in offset press makeready, and how increased costs can result. Some danger signals which warn of feeder trip-off are described. The relationship of paper to feeding troubles is discussed and it is pointed out that cheap paper can be poor economy if it leads to trouble in feeding. Some tips on feeder operation are given with the aid of four diagrams.

Survey Finds Most Art is Incorrectly Prepared. Anon. *National Lithographer* 67, No. 3, March 1960, pp. 35-91 (2 pages). Five questions asked, and some of the answers: 1. What percentage incorrectly prepared? Ans.: 5 to 75 percent, average above 50 percent; 2. Specific types of errors? Ans.: Poorly keyed, color flaps do not register, slovenly pasteups, off color transparencies, etc.; 3. Time lost? Costs customer ⅓ to ½ more. 4. Solution to problem? Education of customers and artists.

A Color Monitor for Sheet Fed Machines. G. S. Allen and K. B. Morris. *Printing Technology*, Vol. 3, No. 2, January 1960, pp. 23-37 (15 pages). The problem of monitoring and controlling ink film density on sheet-fed machines is outlined. The course of development is traced of equipment which has been designed to solve this problem. The resulting equipment and its application to sheet-fed presses is explained, and the results of field trials with this equipment are discussed. 3 Diagrams, 2 References.

The Present-Day Trend of Photo-Litho Graphic Practice in European Countries. S. H. York and F. G. Wallis. *The British Printer* 73, No. 2, February 1960, pp. 114-117 (4 pages). A report on a tour of Western Europeans lithographic plants. Two general impressions were: 1. Much money has been invested in equipment since the war; 2. German equipment "reigns supreme." Other trends noted: darkroom cameras are replacing gallery type; open carbon arcs are not being replaced; vertical enlargers were common; most screen positive work is now being made by contact screens; glass is used for continuous tone color separation; films for black and white and for screen positives; much American photographic material (Ansco and DuPont) is in use. Other comments covered a variety of details.

Preparing Mechanicals for Offset—Part I. John Pince. *National Lithographer* 67, No. 2, February 1960, pp. 32-5 (4 pages). A thorough study of the purpose and use of register marks, both in the preparation of copy and throughout the process. Several methods are shown. 5 line Illustrations.

Part II—*IBID* 67, No. 3, March 1960, pp. 32-5 (5 pages). This part up the step-and-repeat machine, planning for work and turn, etc., planning for backing, reproduction of type and certain special subject line pencil drawings. 5 line Illustrations.

Part III—*IBID* 67, No. 4, April 1960, pp. 38-9, 94 (3 pages). This part considers planning for the bindery, register problems with two or more colors, and the use of overlays and pin and punch register systems.

Offset Paces the Label Field. Leroy L. Gamse. *National Lithographer* 67, No. 2, February 1960, pp. 38-39 (2 pages). Some figures are cited to show the phenomenal growth of lithography in the label field in recent years. It has grown faster than the label field as a whole. In 1939, estimates put lithographed labels at 40 to 45 percent while in 1958, it was 50-60 percent. Economy and speed are given credit. Several other reasons are cited. I Illustration.★

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NAPL

(*Continued from Page 39*)

Halftones Without Dots

Donald R. Spear, Eastman Kodak Co., discussed the application of well-known photographic concepts and various techniques to make photomechanical reproduction without using halftone dots.

Among the methods he described were the following:

1. Kodak Tone Line Process.
2. Posterization.
3. Duotones.
4. Stipple Effects, etc.

He told the group that "Very interesting, unusual and eye-appealing effects can be obtained by using straight lines of variable widths to produce an illustration, in place of the conventional halftone dots."

Another speaker from Eastman Kodak, John McMaster, presented a talk on modern masking methods. He told of some of the things masking can—and cannot—be expected to accomplish, stating that it is a valuable adjunct to the lithographer.

Dr. Roy B. Eastin, executive officer of the U. S. Government Printing Office, concerned himself with some of the new tools in management decision making. He used a very humorous approach to make his points — mostly concerned with the need for a careful study of human relations.

James T. Trousdale, of Anaconda Aluminum Co., final speaker at the regular business sessions of the convention, spoke on lithography on foil.

He noted that some lithography on foil was done as long ago as 1940, but that lithographers encountered numerous problems with the process, and the early specimens are now museum pieces.

A combined effort by foil manufacturers, laminators, as well as paper, ink, and adhesive manufacturers, working in conjunction with lithographers, in recent years has produced a foil laminate that can be lithographed quite successfully, he added.

"Today the lithographer, working with standard equipment, can handle a sheet of laminated foil with a minimum of difficulty and reproduce the quality demanded by even the most exacting customer," he said.

The only major requirement for successful offset printing is a nitrocellulose or vinyl coating on the surface of the foil to accept the image.

As usual, the all-day technical session, with six panelists, covering camera, platemaking, press, ink, paper and research, comprised the Saturday program. Once again, William J. Stevens, of the Miehle Co., Division, Miehle-Goss-Dexter was moderator. (Details next month).

A total of 116 firms utilized 199 exhibit spaces in the biggest equipment show ever staged by NAPL. The show was well attended throughout the meeting; with the program tailored to provide much more open time than in former years for viewing the show. ★

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24" x 30"	100	31.50			
27½ x 31"	100	38.50			
27" x 38"	100	41.00			
30" x 40"	100	48.00			
38½" x 54"	50	41.50			
40" x 50"	50	41.00			

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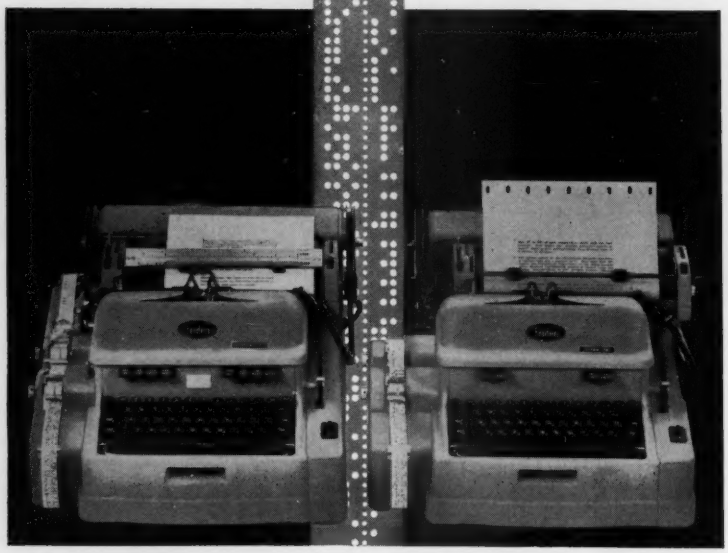

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BLANKET

(*Continued from Page* 35)

uneveness in cylinders, plate, blanket, packing or stock.

3. The blanket saves makeready time because it eliminates the need for critical tolerances. So gentle is the surface pressure applied by the blanket that it can be overpacked to twice normal packing without distortion.

4. It needs no rest to recover its original shape.

5. Plate life is extended because of the blanket's compressibility.

6. Replacement cost is cut almost in half, because the cost of the removable face is only half the total blanket cost, and the blanket backer will last through several replacement faces. If damaged by a severe smash, the removable face is quickly stripped off and replaced on the original backer while still on the press.

Total thickness of the blanket's two parts equals or slightly exceeds that of a conventional blanket. The backer is applied first to the cylinder and tensioned. The removable face is then mounted on top without tension.

The blanket backer is made of laminated fabric and rubber. The body of the removable face is made of fibers impregnated with a special latex. Compressibility is achieved by incorporating tiny air spaces, which make up a large proportion of the total volume. It is these air voids which compress under pressure.

Mounting the Blanket

After the backer has been mounted and tensioned, the removable face is prepared for mounting by stripping off a polyethylene release sheet protecting the adhesive, the company explained. The adhesive is activated, and the face is pressed on to the blanket backer under plate pressure by revolving the offset cylinder one full turn. Cylinder pressure while running maintains adhesion between backer and face. If a severe smash occurs which damages the face, or the blanket becomes worn, it is simply stripped off like adhesive tape, and another face is applied to the backer, company officials explained.★

OFFSET PROVING

(*Continued from Page 48*)

of doing the finest lithography in a controlled manner, producing results equal to those of single-color production presses, which, size for size, cost more than twice as much.

In order to arrive at this condition, many changes had to be made. The presses had to be made considerably heavier; the beds were much reinforced and the dimension of the cylinder and cylinder carriage bearings was increased. The inking sections were increased to as many as 14 inking rollers, including four vibrators, and a three-form-roller system was chosen, whereby one form roller has a larger diameter than the other two. The dampening sections were now also motorized and systems developed assuring dampening with fresh moisture in both directions.

Most important of all: the old two-way inking, whereby the inking section ran in front of the dampening rollers on the return trip, was replaced by a one-way inking system, doing away with plate scums and fill-ins and allowing better moisture control. The result is that today flatbed offset presses are so developed that, with excellent inking and dampening controls, they will almost perfectly duplicate single-color production press results.

At the same time the range has been extended. Heavy duty flatbed offset proof presses can now be had in many sizes ranging from 18 x 24″ to 55 x 78″.

Meanwhile, a lighter but faster flatbed offset press, built along entirely new design principles, was developed out of a military need in World War II. This resulted in a new small-size line of faster presses, ranging from 23 x 30″ down to 13 x 18″ with maximum speeds from 400 to 850 impressions per hour. These are now being used for specialized proving work and short runs, and considering the simplicity of the press, excellent results are obtained in perfect register.

Recently, the question has arisen: What about multi-color proving? Can a multi-color proof press be developed? The answer is that, while this may be theoretically possible, the technical complications are such that a two- or four-color proof press would become both relatively costly and also quite large. On the other hand, new lines of small-size sheet-fed two- and four-color presses have recently been developed, the price of which may justify their usage as two- or four-color proving presses. Four-color sheet-feds are now available in the 20 x 25″ size and even as small as 17½ x 22½″.

In order to evaluate whether a single-color offset proof press or a small multi-color production machine should be considered, one should consider that a single man can proof at least two complete color jobs a day on a flatbed offset press. This number may be larger on a small four-color production machine (three or four jobs), but these presses will have to be manned by at least two people; the machine investment will be larger and the sheet size will be smaller in this instance.

There remains the question whether or not jobs that will have to be produced on four-color machines can be proved correctly on a single-color proof press. The general contention is that this is not possible, and if the same inks are being used on the single-color proof press and the four-color production machine, the result must be different. However, remarkable results have been obtained on single-color machines, simulating four-color machine production, by using process inks especially adjusted for this purpose.

The above outline results in the following picture of the current situation:

Flatbed single-color offset presses from quite small to quite large are available and do a nearly perfect proving job in one or more colors, fully duplicating similar work done on single-color production presses at less than half the initial cost, allowing fast wash-up and make-ready and with considerable economy in manpower. They now are efficient and capable all-round proving units, also suitable for short runs, causing great

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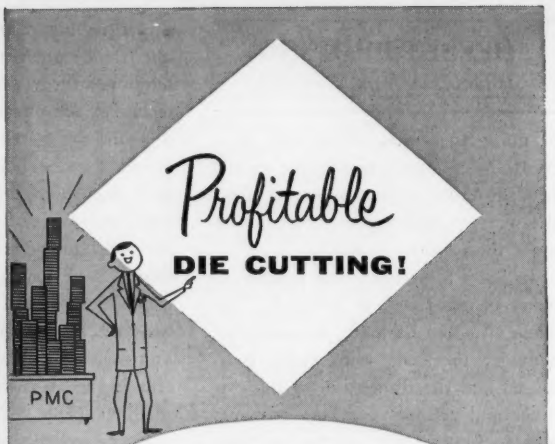

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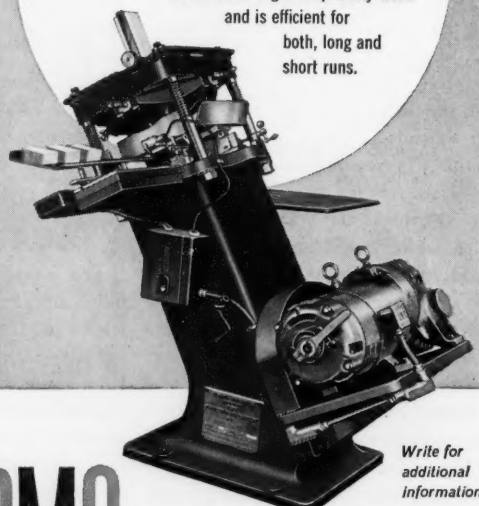

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Small multi-color production units may be used for specific specialized four-color proving operations interspersed with medium-sized and longer runs. Proving on larger single- or multi-color production units can no longer be considered to be justifiable or efficient.★

LITHO PLATES

(*Continued from Page* 42)

requirements, and then make your decision.

As recently as 10 years ago the problem was how to make a good plate from the limited processes available. Today the problem is to select the best plate for the job from any number of good ones. Too many lithographers base their decision on price, convenience and length of run. They forget other factors such as tone reproduction, speed in make-ready, running characteristics on the press, reproduction of solids and the length of time it takes to complete a job. When you weigh all these factors remember that plate costs are the least portion of the total cost of any job. ★

PIA

(*Continued from Page* 44)

series of talks by six union leaders, including Kenneth J. Brown, president of Amalgamated Lithographers of America.

These talks were prefaced by opening remarks by Mendel Segal, Stein Printing Co., Atlanta, who is president of the UES section. He called on the union leaders to recognize that " . . . you have a tremendous responsibility in seeing that your decisions and actions are based on realism and logic in producing more saleable products in peaceful procedures in return for your enviable status among the highest of wage earners."

He added that, with cooperation, tolerance and frankness, "union and management can resolve these problems."

He asserted that "the fast changing picture of our industry, both process and machine-wise, coupled with the obvious steady deterioration of the relationship between your printing unions, is creating doubts in employer's minds as to the ability of unions to resolve specific problems without damaging our relations beyond repair. A satisfactory solution for the tensions existing in our industry today is going to require the most intelligent leadership and extreme tolerance."

Some of the problems he mentioned include overseas competition, an increase in private printing plants, both commercial and governmental, union jurisdictional disputes and "unrealistic, uneconomical and illegal contractural relations."

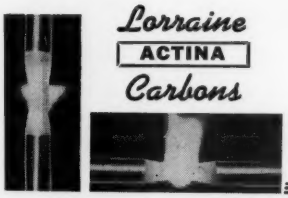
On Thursday the UES devoted its meeting to "Crystal Balling the 1961 Collective Bargaining Picture." This was handled from the viewpoint of composing room, pressroom, bindery and lithography, with George A. Mattson, PIA's director of special services, covering the latter topic.

Also on Thursday, the Rotary Business Forms section held a luncheon and afternoon discussion period. On the agenda were various methods of marketing business forms, including dealer distribution, direct sales and combination plants. On the same afternoon, W. Carey Dowd, III, of Dowd Press, Charlotte, N. C., presided at a "Small Printers' Session," in which PIA services to these printers were discussed. Concluding the special group meetings was one by the Ticket and Coupon Section.

On the Production Session, Friday, were the following topics and speakers: "The Importance of Production," Willard E. Brown, Judd & Detweiler, Inc., Washington, D. C.; "How To Measure Production Results," Byron W. Stinson, Thos. J. Moran's Sons, Inc., Boston; "Using Production Facts Effectively," Gordon Rohde, Reynolds & Reynolds Co., Dayton, O.; "Six Ways To Improve Production," Don Sommer, PIA staff; "We Are Proud To Present," (case Histories of successful management programs to reduce unit production costs) Edward C. Gossel, Blackwell-Wielandy Co., St. Louis; H. Ralph Hernley, Mennonite Publishing House, Scottsdale, Pa.; and Jacob F. Worner, Jr., Printing Service Co., Dayton, O.

Also "When Shall We Buy New Equipment?" Glen C. Hyatt, Evergreen Press Ltd., Vancouver, B. C.; and "The Important Aspects of Purchasing New Equipment," Paul E. Foss, Paul Foss Printing & Litho Co., Minneapolis.

The Technical Forum occupied the



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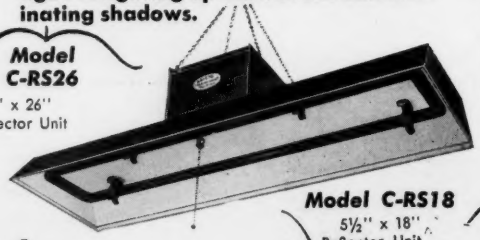

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Saturday session. Bindery, composing room, gravure, letterpress, magnetic ink, and lithographic operations were covered. Handling the lithographic questions were the following: Frank Corcoran, Haynes Lithograph Co., Rockville, Md.; Donald Gemmel, Western Printing and Lithographic Co., Poughkeepsie, N. Y.; and John L. Kronenberg, S. D. Warren Co.

Assisting new president Ehrenberg during the coming year will be Oliver R. Sperry, R. R. Donnelley & Sons Co., vice president; Arthur R. Gratz, Herbick & Held Printing Co., secretary; and Frank F. Pfeiffer, Reynolds & Reynolds Co., treasurer.

Complementing the business program were these other activities: a visit to the PIA headquarters building, the annual banquet and entertainment, the announcement and display of the Self-Advertising Award winners, a Carnegie Alumni breakfast and a full program of events for the ladies in attendance. ★

LETTERS

(*Continued from Page* 21)

summer courses at Carnegie. He has a Multilith, a Webendorfer 17 x 22" and two Heidelbergs, along with type, camera and a very orderly shop. He leases an old quonset building at the airport. Land is high and practically unavailable. Water is a problem, and you can never be sure of constant electric power.

Tuesday afternoon, the juice went off for typography, and he has attended three about two hours while he was in the middle of running a job. The stripper and layout artists had trouble, as you can imagine. Help is a big problem and salaries are low. Living space is at a premium and is high.

Fred Fowler
Washington, D. C.

PRODUCTION CLINIC

(*Continued from Page* 51)

tical test was of no help, as we have mixed results in both cases, probably mostly due to inexperienced gumming-in and a fast changing relative humidity.

G. P., TORONTO

A: After the run has been completed, roll up the plate by dropping rollers on plate. Two revolutions is sufficient.

Pour a sufficient amount of gum on a sponge to spread the gum in both directions. Then, with dampened cheesecloth, smooth down the gum as close to the plate as possible. When the plate has been properly gummed and smoothed down there should be no evidence of streaks. Fan the plate dry immediately.

With a clean, soft cloth wash out the entire work area with Lithotine. Apply Asphaltum with the same cloth that was used to apply the Lithotine. With another clean cloth, wipe down the plate, being careful not to leave streaks. Fan dry, take the plate off press and remove any moisture or residue that might have collected on the back of the plate.

When this procedure is carefully followed, the plate should be ready for storage. I do not advise storing plates between sheets of paper, as paper may transfer moisture to the plates. For identification I would suggest punching small holes at the corners of the plates and suspending them by wire hooks. I also would make out tabs for the wire hooks, telling color of plate, name of job and order number. This method is used by many of the big companies that I've worked for.

How Much Pressure?

Q: *How much pressure can I carry on a large two-color press in between the cylinders before losing bearer contact?*

J. B., CLEVELAND

A: If you start with the normal setting of the press (to the bearers) I would say many tons. If the boxes are in good condition, the cylinders would have to be sprung before losing bearer contact, although the normal printing pressure for offset presses is .002 on presensitized plates and .004 on other plates. ★

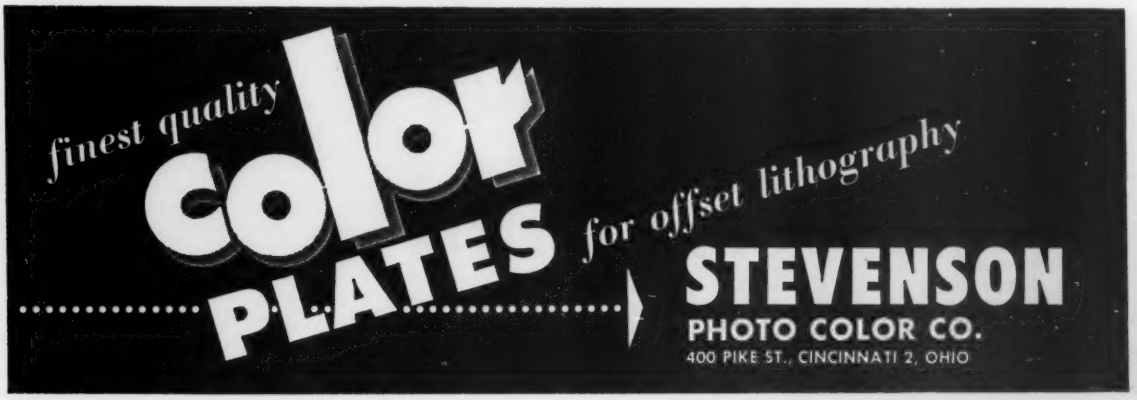
PHOTOGRAPHIC TRICKS

(*Continued from Page* 31)

really was *too* much and we felt bound to seek some way of getting around the trouble, rather than by repeating the best part of a whole day's meticulous work.

As I have said, the solution proved to be quite simple after all. It is explained in Fig. 1, which is an example and not the actual "security restricted" job that we were doing. We developed the contact print and stop-bathed it in two percent acetic acid. What we then wanted was that the scribed center marks should remain as they were, but the rest of the job should be image-etch reversed to positive.

Nothing could be easier! We painted over the center marks with



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cellulose dot-etching staging paint and then proceeded with the image-etch reversal, dissolving away the image and re-developing the previously undeveloped silver halide. Finally we washed off the cellulose paint with acetone and fixed the plate — and voila! another satisfied customer—and some pretty contented lithographers.

Autopositive Film

We have been much impressed, here in Europe, by Eastman Kodak "Autopositive" film. It is astonishing stuff and it was shattering to discover (some years ago) that we could make contact prints on it from negatives or from positives and produce negative or positive results at will—even part negative and part positive image combination prints from two negatives, two positives, or one of each, regardless of which was the negative and which the positive.

At our company, we recently had a fairly simple job to do, which we found particularly convenient on Autopositive film. We wanted to illustrate some parts of a "Monophoto" filmsetter machine for an instruction manual and it was decided that the pictures should be halftones with arrows pointing toward various details mentioned in the text, but we wanted the arrows to be in black with a white "shadow" outline so that they would be visible, whatever the tone of the parts of the picture that they passed through.

The illustration (Fig. 2) shows a page containing two pictures. To produce it we made a halftone negative from each photograph and a line negative of the arrows, etc. (both prism reversed and with common register lines on the originals at the center of three sides for accurately placing them in the step-and-repeat machine).

After suitably squaring up the halftones and opaquing round the sides, one of them was put into the step-and-repeat machine and exposed on Autopositive film to arc light with a yellow gelatine filter before it, thus producing a latent negative image in the film from exposure to a negative. Next, the line negative was positioned in the machine, but set off by ten-thousandths of an inch downwards and to one side of the "correct" center. It was exposed to unfiltered tungsten light which produced a positive (opaque) latent line image wherever it crossed the halftone exposure and no effect in the unexposed surrounding area which would develop black, in any case, if not exposed to strong yellow light.

Finally, the negative was moved back to its "correct" position and exposed to the arc lamp and yellow filter which cleared a transparent image of the line negative. When developed, the result, as may be seen in the lower picture, was a halftone negative image with the line overprint transparent but outlined by an opaque "shadow" image; an easy technique to perform and most effective. In the illustration (Fig. 2) of course we have the result of printing the Autopositive negative to produce the final required positive result.

In the upper illustration of Fig. 2 you will see that there are numbers in the halftone image—all black figures in this case because they chanced to fall over light tones in the picture; but where numbers were in dark tones of the picture we arranged that they should be clear white. This was easily done by covering the appropriate numbers for one or other of the exposures of the line negative, and we put the "shadow" effect only into the arrows.

Other Method Longer

One might suppose that the same effect could have been produced by "trick" printing-down in gum-dichromate from positives, but it would have taken longer, have been much more difficult to execute, and I don't think it could have been done by 'di-gum' only; I think it would have been necessary to include surface prints (albumen) to negatives and re-coating with di-gum—it would certainly not have been nearly so convenient and, of course, there is always an advantage in having the complete job on film because it prints down 'straight' and can always be printed again later without any bother.★

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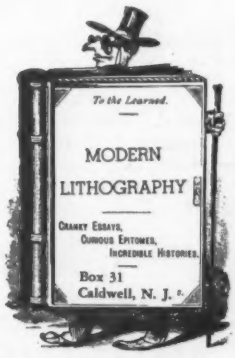

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THE staff of *Modern Lithography* has been trying, in several important ways, to make the pages of your magazine more valuable to you. Increased in-person coverage of litho club and trade association meetings has been one way. Interpretative articles on subjects of vital interest to you is another. That's the reason for our recent series on presensitized plates, three-color direct separation, and visits to typical litho shops and for our expanded coverage of the litho news in all parts of the United States and foreign countries.

Our climbing circulation figures indicate your appreciation of our efforts. But are you taking *full* advantage of your lithographic magazine? In past months, many of you have availed yourself of the services of our two regular columnists, *Frank Arbolino* (Press Clinic) and *Herbert P. Paschel* (Photographic Clinic). The purpose of this page is to remind you that if you have a troublesome problem regarding press or camera, these specialists are ready to help you solve it. If you are a subscriber to ML and have a question why not jot it down on the coupon below and send it along to us? We'll be glad to help you, and the service is free.

MODERN LITHOGRAPHY
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☐ Mr. Arbolino (Press)

☐ Mr. Paschel (Photography)

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TALE ENDS

LATE in September, Newark's Channel 13 carried an intriguing hour-long program on "automation." Mike Wallace, that veteran interviewer, asked lithographers in various jobs at Eastern Colortype's plant how they felt about the prospect that machines might take their jobs. To a man they replied that they are confident that the newer equipment and techniques will, in the long run, help the industry—and hence their chances of employment—more than they will hurt. In a round-table discussion that followed, Mr. Wallace sought the opinions of labor leaders in the textile and mining industries, both of whom evidenced much more trepidation about the effects of automated processes.

George Diebold, self-proclaimed inventor of the word "automation" (we always thought that the first caveman to use round wheels instead of square should get the credit) contributed little to the discussion, but Edward Swayduck and Kenneth Brown, head of Local 1 and international president, respectively, of ALA, sought to establish the point that automated techniques had actually helped boost the lithographic industry in comparison with its competitors. The coal and textile leaders had written off offset's gains as being just part of an expanding industry.

Biggest surprise of the program, however, was the startling fact that the loquacious Mr. Swayduck had to wait a full 20 minutes before saying a word!

•

Nearly six years ago, when ML led the exodus of publishers from New York to exurbia (there are now three graphic arts magazines in North Jersey), one of our competitors gave us the needle for months about "getting out of touch" with the industry, "being away from all the activity," etc. Somehow our editorial staff managed to keep the magazine alive, nay, even to prosper a bit. Last month, our kibitzing compatriots used a good deal of text and pictures in their issue to proclaim their triumphal move to the suburbs, apparently in order to "lose touch" along with ML.

Welcome to the hinterlands, boys, but watch out for those Indians!

•

At presstime, ML received word that plans for the acquisition of a famous old Boston litho firm by a large New York combination plant were just about completed.

•

Busy as ML's staff was, trying to cover all aspects of the NAPL convention, we were delighted to visit the nuArc plant in Chicago, to tour the elaborate facilities along with a group of the company's dealers.

Two second-generation lithographers—the sons of NAPL veterans Bill Krueger and Tom Morgan—came along to the NAPL convention with their fathers to see what lithography is all about. Young Krueger is a student at Wisconsin, while the son of NAPL's new president, is an undergrad at Iowa State. For several years another member of the younger generation, Harry Brinkman's son Tom, has been in attendance; and now serves on the board.

•

E. G. Ryan, one of the pioneers in web-offset and a salesman of press equipment for more than 50 years, was congratulated by scores of friends, customers and staff members (E. G. Ryan and Co., Chicago), Oct. 13, on the occasion of his 75th birthday. Mr. Ryan's girl friday (a very good reporter) tells us that her boss once took a brief fling into cub reporting and professional baseball, after graduation from the University of Illinois, but seeing the error of his ways, has since spent a lifetime selling a wide variety of press equipment and supplies. At present he is web-offset sales consultant for Miehle, continuing as vice president and sales manager for the George Hantscho Co., Inc. ML is happy to join in tribute to Ed Ryan! ★

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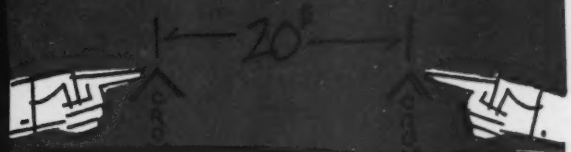

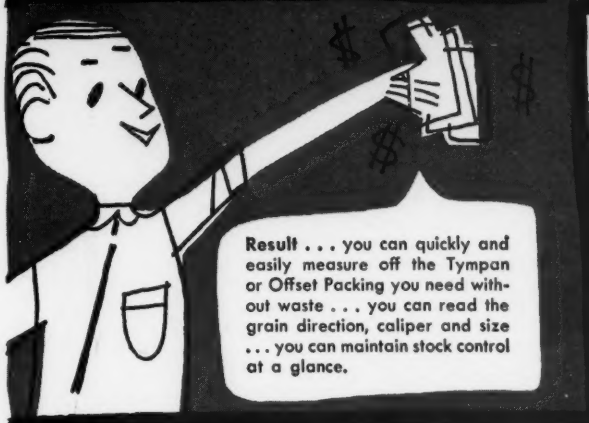

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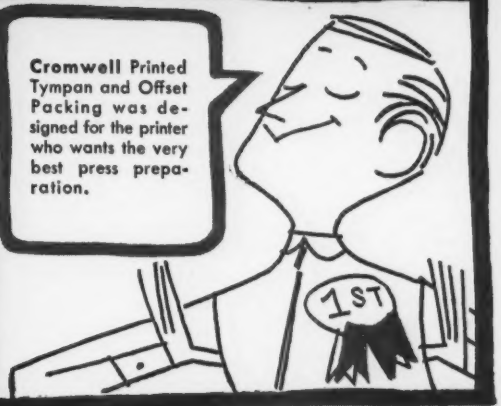

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